The Law and Economics of the Exclusionary Rule

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The exclusionary rule is premised on behavioral assumptions about how the law shapes police conduct. This Article uses a law and economics approach and formally models the implications of these assumptions. It shows: first, that in attempting to deter police violations, the rule does little to discourage police harassment of ordinary citizens, particularly minorities, potentially even leaving police with a dominant strategy to search; and second, when applied at trial, the rule decreases the benefit of the doubt received by defendants who are most likely to be actually innocent. Judicial attempts to mitigate these costs of the exclusionary rule in fact exacerbate them. The manifold jurisprudential rules that make up this area of law can be assessed in terms of the extent each effectively differentiates between the guilty and the innocent. Assessed in this way, it becomes clear that much of the secondary jurisprudence in search and seizure law further aggravates the problem. A means of assessing the appropriateness of this secondary jurisprudence is provided, that promotes better screening between innocent and guilty defendants.

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Introduction

The exclusionary rule is the principal remedy of constitutional criminal procedure, and also its most controversial element. For many, the notion of refusing to allow juries to consider relevant evidence because of police misconduct is anathema to the nature and purpose of juridical inquiry, but it is arguably also the only way to deter constitutional violations. The existing literature centers on these normative and empirical questions, but neither has brought any

1 See Akhil Reed Amar, Fourth Amendment First Principles, 107 Harv. L. Rev. 757, 793 (1994) (describing how society benefits from the introduction of evidence, even if it arises from an illegal search, because "[w]hen rapists, burglars, and murderers are convicted, are not the people often more 'secure in their persons, houses, papers, and effects?'").

2 See Mapp v. Ohio, 367 U.S. 643, 648 (1961) (stating that the exclusionary rule is a "constitutionally required—even if judicially implied—deterrent safeguard without . . . which the Fourth Amendment would have been reduced to a 'form of words'".

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resolution, nor are they considered likely to do so. This Article provides a new approach, applying a law and economics analysis to the exclusionary rule, which allows for a reassessment of its costs and benefits. Rigorously drawing out the implications of the Supreme Court's behavioral assumptions unveils additional costs that the rule imposes. Most significantly, this Article shows first, that the exclusionary rule is unlikely to be effective under most realistic conditions—and thus its benefits are questionable—and second, that its costs fall overwhelmingly on innocents, both defendants and non-defendants. This same analysis provides a means of assessing the secondary doctrinal components of search and seizure law and a mechanism for reforming the most harmful effects of the exclusionary rule.

The exclusionary rule was developed as an automatic and binary mechanism whereby evidence is admitted or not admitted, depending on the violation of a fixed constitutional line, regardless of the substantive unfairness to the defendant or the probative value of the evidence. But after its initial development and the broadening of its application to all the states, the Supreme Court has gradually narrowed the rule through the institution of a number of exceptions, including exempting knock-and-announce violations, creating a good-faith exception for court administrators, and extending that exception to police officers in certain circumstances. The Roberts Court has determined that future application of the exclusionary rule will depend on whether its value in terms of deterring police from constitutional violations is deemed to outweigh the social costs to the justice system. These costs are traditionally assessed in terms of lost

3 The Supreme Court has concluded that it is not possible to assess the exclusionary rule's empirical effect on deterrence, or to ascertain the rule's true costs. See infra note 30.
5 See Mapp, 367 U.S. at 660 ("Having once recognized that the right to privacy embodied in the Fourth Amendment is enforceable against the States...we can no longer permit that right to remain an empty promise.").
6 See Hudson v. Michigan, 547 U.S. 586, 599 (2006) ("[T]he social costs of applying the exclusionary rule to knock-and-announce violations are considerable; the incentive to such violations is minimal to begin with, and the extant deterrences against them are substantial... Resort to the massive remedy of suppressing evidence of guilt is unjustified.").
7 See United States v. Leon, 468 U.S. 897, 920–21 (1984) (noting generally that "when an officer acting with objective good faith has obtained a search warrant from a judge or magistrate and acted within its scope, there is no police illegality and thus nothing to deter").
9 See id. at 147–48 (noting that "any marginal deterrence" of excluding an error made in good faith must "pay its way" (internal quotation marks omitted)).
arrests, inefficient prosecutions, and lost convictions, but there are additional costs imposed by the exclusionary rule, both at the policing and trial stages.

In terms of policing, the exhaustive literature challenging whether the exclusionary rule actually deters police from violating the Fourth Amendment, and whether its costs overwhelm its benefits, can be understood in terms of established law and economics phenomena: selection bias, principal-agent problems, moral hazard, and avoidance through substitution. First, the rule provides a remedy only for defendants where incriminating evidence was actually found against them—those who are thus most likely to be actually guilty—and fails to provide any remedy to citizens against whom unconstitutional searches were conducted where no such evidence was found—those most likely to be actually innocent. All of the doctrine is based on this selection bias, reinforcing the focus on defendants incriminated by searches, and providing protection to non-defendants, or defendants exculpated by searches, only through a jurisprudential trickle-down effect of protection. But the interests of guilty and innocent defendants are not often the same. Second, exclusion is a penalty intended to deter police from future violations, but it offers no punishment for police harassing innocent citizens who are not ultimately prosecuted, or for police who mistakenly rather than intentionally violate constitutional rights. This creates principal-agent problems, distorting the motivations of even well-intentioned officers. Third, consequently, the rule encourages police perjury and aggressive policing, two substitution effects that undermine the rule’s operation. The overall result is that police incentives are not as the Supreme Court presumes they are.

By formally modeling how the exclusionary rule operates within the context of actual police incentives, I show that while the exclusionary rule can deter some searches, it will not do so under typical conditions. In fact, the exclusionary rule only works as the Court claims under very unusual circumstances, requiring police to place very little value on getting drugs or weapons off the street; furthermore, the police may still have a dominant strategy to search under other conditions, even if exclusion of evidence is guaranteed. As such, the exclu-

10 See Brinegar v. United States, 338 U.S. 160, 181 (1949) (Jackson, J., dissenting) (“Courts can protect the innocent against such invasions only indirectly and through the medium of excluding evidence obtained against those who frequently are guilty.”).
11 For a discussion of civil remedies, see infra Part III.C.
tionary rule does not have the deterrent effect that the Court claims it does.

At the trial stage, the exclusionary rule operates to prevent evidence from ever reaching the jury, but jurors make inferences from other evidence and trial procedure, and deduce the operation of the rule. Accordingly, they discount the prosecution’s burden of proof—and the defendant’s right to reasonable doubt—by an estimate of the effect of the rule. But the inaccuracy inherent in this process means that defendants for whom the exclusionary rule has not in fact been exercised will be systematically penalized. I show that exclusion of tainted evidence does not simply return defendants to their neutral positions, but for an illegal search. Rather, the exclusionary rule benefits defendants most likely to be guilty at the expense of the actually innocent—the exclusionary rule actually decreases the chance of finding a reasonable doubt for those defendants most likely to be innocent.

The well-worn debate over the exclusionary rule is framed in terms of the extent we should be willing to allow the guilty to go free so as to expansively interpret the rights of accused criminals. Setting the guilty free is an accepted price for both long-range deterrence against police violations of constitutional rights, as well as the expressive commitment to fairness in the criminal justice system. However, wrongly convicting the innocent is not part of that deal. The proverbial ten guilty men are not meant to be set free for their own sake, but rather so that the one innocent person goes free. This Article establishes that by instituting constitutional protections for actually guilty criminal suspects, the exclusionary rule creates a higher burden of proof for actually innocent defendants. As such, the vast literature justifying or criticizing the exclusionary rule for the extent to which it treads the correct balance for guilty suspects misses the most vital point.

There are a number of reasons why these additional costs have not been appreciated by prior scholars. First, because the rule is now

12 See Fed. R. Evid. 105 (“When evidence which is admissible as to one party or for one purpose but not admissible as to another party or for another purpose is admitted, the court, upon request, shall restrict the evidence to its proper scope and instruct the jury accordingly.”).

13 See Mapp v. Ohio, 367 U.S. 643, 659 (1961) (“The criminal goes free, if he must, but it is the law that sets him free. Nothing can destroy a government more quickly than its failure to observe its own laws, or worse, its disregard of the charter of its own existence.”).

14 See 4 William Blackstone, Commentaries *358.
justified exclusively in terms of its deterrence effect, the courts and
the literature have focused almost exclusively on the deterrent effect
of the rule at the policing stage. However, what happens at the trial
stage determines whether the incentives the Court assumes will actu-
ally exist. Second, economic analysis is seldom applied to constitu-
tional criminal procedure; however, it is extremely useful, as it reveals
the implications of the behavioral assumptions that the Supreme
Court routinely makes. Unlike most of constitutional law, which is
interpreted with reference to such fundamentals as the Constitution’s
text, structure, and the framers’ intent, constitutional criminal proce-
dure is based on behavioral assumptions. Yet the empirical evidence
of deterrence is highly disputed. The economic analysis in this Arti-
cle shows that the exclusionary rule is not simply ineffective and
costly, but it undermines the foundation of the criminal justice system
in sorting innocent and guilty defendants. Finally, because the exclu-
sionary rule is only visible with respect to criminal defendants, some
commentators have reframed the Fourth Amendment right of all citi-
zens as a right which only applies to criminal defendants. At the
very least, this reframing inappropriately marginalizes the constitu-
tional rights of citizens who are subjected to the exercise of police
power but never become criminal defendants. By including non-
defendants, as well as defendants, in the Fourth Amendment, it is pos-
sible to avoid the ideological divisions that are rife within the litera-
ture, and to find a middle ground, where a Fourth Amendment
violation does not permit someone to commit crimes with immunity
but also does not equate the fact that someone has committed a crime
with the police being able to violate her constitutional rights with
impunity.

15 The Court has declared that deterrence is the only consideration in assessing
the application of the exclusionary rule. See United States v. Leon, 468 U.S. 897, 921
n.22 (1984) (stating that the previously relied upon rationale of judicial integrity is
actually subsumed within the deterrence rationale).

16 See infra Part I.

17 See infra Part I.A.

18 See Myron W. Orfield, Jr., Deterrence, Perjury and the Heater Factor: An Exclusionary
Rule in the Chicago Criminal Courts, 63 U. COLO. L. REV. 75, 75 (1992) (noting that both
sides of the debate put forward arguments “concerning the practical operation and
effects of the rule,” that “are almost entirely speculative; driven by ideological commit-
ment rather than by observation”); L. Timothy Perrin et al., If It’s Broken, Fix It: Mov-
ing Beyond the Exclusionary Rule: A New and Extensive Empirical Study of the Exclusionary
Rule and a Call for a Civil Administrative Remedy to Partially Replace the Rule, 83 IOWA L.
REV. 669, 710 (1998) (“[I]t is unfortunate that in so many cases it appears the
researcher’s findings were skewed by his initial premise.”).
Part I shows that at the policing stage, the exclusionary rule does not work for either defendants or non-defendants. The rationales for the rule have been described as "sit[ting] atop a pile of dubious assumptions and inferences;" this Part shows that those assumptions introduce into the criminal justice process selection biases, information asymmetries, misaligned incentive structures, and substitution effects. Section D of this Part formally establishes the effects of these police incentives and shows that the exclusionary rule seldom will have the effect that the Court assumes of deterring police violations.

Part II shows that at the trial stage, the exclusionary rule harms innocent defendants through three effects: juror resistance, juror error, and a perverse screening effect—that is, it undermines the differentiation the criminal justice process would otherwise make between innocent and guilty defendants. Section D of this Part crafts the first game theoretic formal model that mathematically establishes these effects.20

Part III briefly explores the drawbacks of solutions that have previously been proposed to solve these problems—jury instructions, evidentiary rules, making the exclusionary rule proportional, and extending 42 U.S.C. § 1983 civil remedies. Some of these options mitigate some of the damage of the rule, but each has its limits and can even introduce additional harms. Part III also shows that the problems identified in Parts I and II manifest themselves not only among jurors, but also among judges. At the trial stage, judges

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19 Amar, infra note 1, at 792; see also Orfield, supra note 18, at 75–76 ("[T]he Court’s actions are rooted in a series of assumptions concerning the operation of the rule in practice that are largely isolated from reality.").

20 The only formal economic models of the exclusionary rule are: Hugo M. Mialon & Sue H. Mialon, The Effects of the Fourth Amendment: An Economic Analysis, 24 J.L. ECON. & ORG. 22 (2008); Dhammika Dharmapala & Thomas J. Miceli, Search, Seizure and (False?) Arrest: An Analysis of Fourth Amendment Remedies When Police Can Plant Evidence, (Univ. of Conn., Working Paper No. 2003-37, 2003), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=449340; Nicola Persico, Benjamin Lester, & Ludo Visschers, Information Acquisition and the Exclusion of Evidence in Trials, J.L. ECON. & ORG. (forthcoming); and Dhammika Dharmapala, Nuno M. Garoupa, & Richard H. McAdams, Do Exclusionary Rules Convict the Innocent? (Univ. of Chi. Law & Econ., Olin Working Paper No. 569, 2011), available at http://ssrn.com/abstract=1914453. The first focuses on the extent to which the exclusionary rule encourages crime and affects the number of police searches and seizures; the second provides a model of the incentives of police to plant evidence, but is more a model of the warrants clause than the exclusionary rule; the third models exclusions of evidence based on the prejudicial effect outweighing its probative value. None of these articles focus directly on the question here of whether the assumptions about the deterrent effect of the exclusionary rule actually hold true. The fourth is a working paper that builds on the analysis of this Article and is discussed infra, note 182.
engage in the same resistance that jurors display, through manipulating their fact-finding. Appellate judges also display resistance to the rule, and this is even more problematic: in attempting to mitigate the adverse effects of the exclusionary rule, higher court judges twist and subvert the secondary doctrines in this area of law. For instance, certain searches are re-categorized as non-searches, to avoid the rule's operation and its unattractive outcomes. These jurisprudential distortions further undermine innocence-guilt screening. In order to overcome both the direct harms of the exclusionary rule and these secondary manifestations, finally, I propose that future rules should be structured to promote differentiation between guilty and innocent defendants and show how that can be done. The ultimate purpose of the criminal justice system, and the approach that is most likely to achieve justice with minimal intrusions on the constitutional rights that the Fourth Amendment is designed to protect, is to differentiate between guilty and innocent defendants. As such, ancillary rules should be assessed in those terms. Three examples are examined using this criterion, indicating which areas of search and seizure law require reform. Thus this economic analysis yields a powerful new jurisprudential approach to this old debate.

I. THE EFFECTS OF THE EXCLUSIONARY RULE AT THE POLICING STAGE

The Fourth Amendment protects "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures," and specifies procedural safeguards to that end.21 Thus the Amendment explicitly protects against repressive incursions by the state into people's privacy, the modern focus of which is police searches of suspects.22 The Court has ruled that the Amendment also implicitly protects against the use of the fruits of any

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21 See U.S. CONST. amend. IV (adding, "and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized"). I focus here on Fourth Amendment search and seizure, the most frequent application of the exclusionary rule, but the analysis also applies to a lesser extent to exclusion of evidence under the Fifth and Sixth Amendments. The issues are slightly different in these contexts; as Oaks noted, "[e]vidence obtained by an illegal search and seizure is just as reliable as evidence obtained by legal means"—which is often not true in relation to a confession or an improper lineup. Dallin H. Oaks, Studying the Exclusionary Rule in Search and Seizure, 37 U. CHI. L. REV. 665, 666 (1970).

22 Grand juries are also covered, but with lower thresholds, and have been less central to the jurisprudence. See, e.g., United States v. Dionisio, 410 U.S. 1, 9-10, 15-16 (1973) (explaining that a preliminary showing of reasonableness is not required for a grand jury subpoena, since it is not a "seizure" in the Fourth Amendment sense).
such repressive police incursions in judicial proceedings. This implicit protection against use of the fruits of tainted searches gives rise to the exclusionary rule: evidence cannot be used that results from unreasonable searches and seizures.\textsuperscript{23} The exclusionary rule is not a textually derived constitutional principle;\textsuperscript{24} rather, it is justified both as an expressive commitment to constitutional rights, and by the empirical claim that it increases observance of constitutional rights by deterring police violations of the Fourth Amendment. Opponents of the exclusionary rule question both the fitness of the expressive commitment and the deterrence value of the rule, as well as emphasizing the costs of exclusion, in terms of police inefficiency and lost convictions.\textsuperscript{25}

The Court's adoption of an exclusively consequentialist deterrence rationale for the exclusionary rule has led to an extensive empirical debate over the costs and benefits of the rule, which lends itself well to law and economics analysis. This Part undertakes that analysis, establishing what police incentives exist, then uses a formal model to determine whether the exclusionary rule will be effective, given those incentives. But before diving into that discussion, it is worth noting that even if empiricists can show that the exclusionary rule is both ineffective and inefficient, an expressive justification for the exclusionary rule could nonetheless be maintained.\textsuperscript{26}

\begin{itemize}
  \item \textsuperscript{23} See \textit{Wong Sun v. United States}, 371 U.S. 471, 484 (1963).
  \item \textsuperscript{24} See \textit{Davis v. United States}, 131 S. Ct. 2419, 2423 (2011) (noting that "to supplement the bare text [of the Fourth Amendment], this Court created the exclusionary rule").
  \item \textsuperscript{25} A concise summary of many of the arguments in this area of law is provided by David A. Harris, \textit{How Accountability-Based Policing Can Reinforce—or Replace—the Fourth Amendment Exclusionary Rule}, 7 OHIO ST. J. CRIM. L. 149 (2009).
  \item \textsuperscript{26} In fact, although the modern Supreme Court has largely discarded the judicial integrity justification, concluding that it is subsumed within the deterrence rationale—see \textit{United States v. Leon}, 468 U.S. 897, 921 n.22 (1984) ("Our cases establish that the question whether the use of illegally obtained evidence in judicial proceedings represents judicial participation in a Fourth Amendment violation and offends the integrity of the courts 'is essentially the same as the inquiry into whether exclusion would serve a deterrent purpose.'" (quoting \textit{United States v. Janis}, 428 U.S. 433, 459 n.35 (1976)))—early cases justified the exclusionary rule as an expressive commitment to the integrity of the judicial process. See \textit{Mapp v. Ohio}, 367 U.S. 643, 659 (1961); \textit{Olmstead v. United States}, 277 U.S. 438, 485 (1928) (Brandeis, J., dissenting) ("If the Government becomes a lawbreaker, it breeds contempt for the law . . . ."); \textit{Weeks v. United States}, 232 U.S. 383, 392 (1914) ("The tendency of those who execute the criminal laws of the country to obtain conviction by means of unlawful seizures and enforced confessions . . . should find no sanction in the judgments of the courts which are charged at all times with the support of the Constitution."). Some justices still rely on the judicial integrity rationale. See, e.g., \textit{Herring v. United States},
costs of the rule could display the depth of the judiciary's commitment to the rule, exemplifying the importance of recognizing, if not rectifying, constitutional wrongs. However, Part II shows that the exclusionary rule is not simply costly in terms of lost convictions, it is also harmful to innocent defendants and non-defendants. Thus, even as a purely expressive mechanism, the exclusionary rule is not well tailored to its goals.

A. The Theory and Empirics of Deterrence—The Problem of Selection Bias

This Part shows that the empirical claims used to justify the exclusionary rule either have not been established or have even been shown to be false. The significance of this state of the literature is beyond mere academic interest: the exclusionary rule is generally a constitutionally mandated remedy, justified exclusively in terms of its actual impact in deterring future police violations of the Fourth Amendment. Thus to the extent that these empirical claims are not accurate, the legitimacy of the exclusionary rule falters.

27 But see Davis, 131 S. Ct. at 2426 (stating that “the exclusionary rule [...] is a ‘prudential’ doctrine created by this Court” (citation omitted)). However, this view is contrary to prior precedent. Compare id., with Mapp, 367 U.S. at 648 (noting that the exclusionary rule is “constitutionally required—even if judicially implied”), and Davis, 131 S. Ct. at 2436 (Breyer J., dissenting) (stating that the exclusionary rule is “the normal remedy for a Fourth Amendment violation” unless an exception applies).

28 See Leon, 468 U.S. at 906.

29 Exceptions are justified in terms of the rule lacking any deterrent effect in the exempted application. See id. at 907 (stating that any application of the rule must be assessed in terms of its deterrent effect); see also Herring, 555 U.S. at 144 (“To trigger the exclusionary rule, police conduct must be sufficiently deliberate that exclusion can meaningfully deter it, and sufficiently culpable that such deterrence is worth the price paid by the justice system.”). The Court has held that where the deterrent effect of the exclusionary rule has become sufficiently institutionalized, the rule itself may no longer be necessary. See Hudson v. Michigan, 547 U.S. 586, 599 (2006) (finding that “increasing evidence that police forces across the United States take the constitutional rights of citizens seriously” means that “it is not credible to assert that internal discipline, which can limit successful careers, will not have a deterrent effect,” and so resorting to “the massive remedy of suppressing evidence of guilt is unjustified” for knock-and-announce violations). For criticism of this argument, see Herring, 555 U.S. at 156 n.6 (Ginsburg, J., dissenting) (“[P]rofessionalism is a sign of the exclusionary rule’s efficacy—not of its superfluity.”).
Whether measured in terms of arrests, convictions, or exclusions at trial, the empirical literature has failed to establish either the benefits or the costs of the exclusionary rule. While both the Supreme Court and empirical scholars themselves have acknowledged this is unlikely to change, the fundamental causes of its failure have not been fully appreciated. The principal reason, explored in this section, is that there is an unavoidable selection effect in every empirical study in the area, because the exclusionary rule itself creates a massive selection effect—that is, the analysis is systematically skewed from being based on a nonrandom, unrepresentative sample of cases.

Attempts have been made to measure the effect of the exclusionary rule in terms of whether arrests went up or down after its introduction, but the data produced strongly conflicting conclusions. Despite the fact that *Mapp* effectively created a natural experiment, because numerous states had voluntarily adopted the rule prior to the Court mandating it for all states, it is impossible to ascertain the rule’s effect by counting arrests. A dramatic drop in arrests could indicate that police were restrained by the exclusionary rule from arresting those they did not have probable cause to search. But equally, it could be a sign that police were increasing problematic searches:

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30 *See Janis*, 428 U.S. at 452 n.22 ("No empirical researcher, proponent or opponent of the rule, has yet been able to establish with any assurance whether the rule has a deterrent effect . . ."). *Bivens v. Six Unknown Named Agents of Fed. Bureau of Narcotics*, 403 U.S. 388, 416 (1971) (Burger, C.J., dissenting) ("[T]here is no empirical evidence to support the claim that the [exclusionary] rule actually deters illegal conduct of law enforcement officials."). Similar conclusions have been reached regarding ascertaining the rule’s true costs. *See Illinois v. Gates*, 462 U.S. 213, 257 (1983) (White, J., concurring) ("We will never know how many guilty defendants go free as a result of the rule’s operation.").

31 *See*, e.g., Thomas Y. Davies, *A Hard Look at What We Know (and Still Need to Learn) About the “Costs” of the Exclusionary Rule: The NIJ Study and Other Studies of “Lost” Arrests*, 1983 Am. B. Found. Res. J. 611, 619 (1983) (finding that the “inadequacies of research design and the measurement problems” mean that “it is quite unlikely that there will be any rigorous measurement of the rule’s specific deterrent effect in terms of how often illegal searches have been prevented”); Perrin et al., *supra* note 18, at 673, 755 (arguing that past studies failed to provide any convincing evidence of deterrence, and “the value of the exclusionary rule as a deterrent and its place in the criminal justice system cannot be definitively resolved through empirical studies”).

32 *Compare* Oaks, *supra* note 21, at 690–91 (showing that in Cincinnati, the trend in gambling arrests was clearly lower after *Mapp*, but this downward trend had begun two years prior to that case, and decreased consistently for a number of years afterwards), *with* Bradley C. Canon, *Is the Exclusionary Rule in Failing Health? Some New Data and a Plea Against a Precipitous Conclusion*, 62 Ky. L.J. 681, 704–05 (1974) (showing that while there was no change in Cincinnati and a number of other cities, there arguably was considerably more change in Baltimore and Buffalo, among others; but conceding that “it is not at all clear that there is a typical response to the exclusionary rule”).
because of the uncertainty *Mapp* created, police may have performed more illegal searches in *Mapp*'s wake, and consequently initiated fewer arrests; in addition, *Mapp* could have led to an increase in the use of "preventive patrols"—police searches aimed not at arrest and prosecution, but at confiscation of weapons and drugs—as one study found. On the other hand, the exclusionary rule may have led to an enormous reform of police activities, but still show absolutely no change in arrest statistics, because police simply changed the procedure by which they conducted searches to make them legal, as *Mapp* dictated.

Additionally, arrest statistics may miss many other costs of the exclusionary rule, from frivolous motions that increase costs on prosecutors' offices, to a purported causal increase of the exclusionary rule on crime rates. Measuring the effect of the exclusionary rule requires assessing not just the number of arrests but the extent of police violation of Fourth Amendment rights, and even more difficult but most salient, how often non-violation occurs because of the rule.

Similar problems apply to studies focusing on the frequency with which the exclusionary rule is exercised at trial. One problem with this approach is that exercise at trial is used both as a sign of the effectiveness of the rule—its benefit—as well as being taken as an indication of its cost. But counting the number of times the rule is exercised may miss much of the impact of the exclusionary rule. For instance, low numbers of actual exercises of the exclusionary rule could mask a far larger number of felons who were released before getting to court.

This is a product of the selection bias in the exclusionary rule: we cannot count the benefits or costs of the rule, because most costs occur in those cases that do not come to court. The impact of the exclusionary rule must be measured by looking at all police searches and seizures, not just those that come to court. This means that the effect of the rule on crime rates cannot be measured by looking at the number of times the rule is exercised. Instead, we must look at all police searches and seizures, and then measure the impact of the exclusionary rule on the frequency and extent of police violation of Fourth Amendment rights. This is a much more difficult task, but it is the only way to accurately measure the impact of the exclusionary rule.

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34 See Perrin et al., *supra* note 18, at 711.
35 Atkins and Rubin found that crime rates significantly increased in jurisdictions where *Mapp* took effect, by 3.9% for larceny, 4.4% for auto theft, 6.3% for burglary, 7.7% for robbery, and 18% for assault. See Raymond A. Atkins & Paul H. Rubin, *Effects of Criminal Procedure on Crime Rates: Mapping out the Consequences of the Exclusionary Rule*, 46 J.L. & Econ. 157, 166 (2003). In suburban cities, the effect on violent crime was a 27% increase, and on property crime a 20% increase. See id. at 171.
36 See, e.g., Oaks, *supra* note 21, at 681–89.
37 See *United States v. Leon*, 468 U.S. 897, 908 n.6 (1984) ("Many of these researchers have concluded that the impact of the exclusionary rule is insubstantial, but the small percentages with which they deal mask a large absolute number of felons who are released because the cases against them were based in part on illegal searches or seizures.")
rule is felt when the police fail to arrest, or prosecutors fail to prosecute, in anticipation of future exercise of the rule. There are more subtle effects as well. For instance, at the prosecutorial stage alone, a prosecutor facing a case that relies on a potentially illegal search may decide not to pursue the case. Or a prosecutor may offer a plea bargain or present a lower charge, due to the uncertainty about whether evidence will be excluded or not. A prosecutor may alter her trial strategy, based on the risk of potential exclusion—for example, by calling a witness who can provide similar evidence to that uncovered by the illegal search, but who may have credibility issues or be otherwise unreliable. Thus in addition to lost prosecutions, there are “inefficient prosecutions”—prosecutors proceeding without a key piece of evidence, which increases the chance of acquittal, as well as prosecutions weighed down by multiple suppression motions that defendants use as “bargaining chips.”

Similar effects arise in other stages: police may not simply fail to arrest; rather, they may change the charge, to avoid reliance on potentially tainted evidence, or alter their investigative strategy, or focus on crimes with less potential for constitutional pitfalls. These effects may constitute exclusionary rule “over deterrence”—excessive caution exercised by the police.

The problem of selection effects also arises when assessing the impact of the exclusionary rule in terms of lost convictions. A study of lost arrests in California from 1976 through 1979 by the National Insti-

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38 See Canon, supra note 32, at 724 n.26 (finding that 0% of prosecutors reported having never dropped charges because of evidence being illegally seized, 30% reported having rarely dropped charges, 49% reported having occasionally dropped charges, 16% reported having somewhat frequently dropped charges, and 5% reported having very frequently dropped charges).


40 For example, one economist proposes that if police officers adhere to stronger Fourth Amendment procedures, the higher costs of performing such searches will prompt police to conduct fewer searches, resulting in lower probabilities of crime resolution. See Raymond Allen Atkins, Economic Analysis of Criminal Procedure (1998).

41 Alternatively, if breaking the rules is easier than following the rules, there could instead be under-deterrence. See Evan Osborne, Is the Exclusionary Rule Worthwhile?, 17 CONTEMP. ECON. POL’Y 381, 382 (1999) (characterizing the difficulty with enforcing Fourth Amendment rights as a principal-agent problem, whereby following the rules requires more effort for the police than does breaking the rules, and so police will have an incentive to “shirk” the full breadth of the rules).
tute of Justice found that 6% of arrestee releases by the police were
due to search and seizure problems,\textsuperscript{42} 4.8% of all felony arrests were
rejected by prosecutors because of search and seizure problems,\textsuperscript{43} and
3.7% of felony dismissals at the court level were due to search and
seizure problems.\textsuperscript{44} In narcotics cases, where the exclusionary rule
has its greatest impact, approximately 30% of felony drug arrests were
rejected due to search and seizure problems.\textsuperscript{45} In contrast, a 1979
General Accounting Office study found that 10.5% of defendants
requested evidence suppression on Fourth Amendment grounds, but
were only granted total suppression in 3.5% of cases and partial sup-
pression in 5.9% of cases.\textsuperscript{46} That report estimated that 6.3% of cases
declined for prosecution by U.S. attorneys involved search and seizure
issues, but only 6.3% of that subsection were declined primarily due to
search and seizure problems—which translates to search and seizure
being the primary reason for declining a case in only 0.4% of federal
cases.\textsuperscript{47} These conflicting numbers are obviously important, but since
most investigations in which a judicial exclusion is likely to occur will
be jettisoned by the prosecution before reaching a judicial determina-
tion, these numbers constitute aberrations, and so are uninformative.

The problems endemic within the empirical studies described
above arise out of an inherent methodological problem produced by
the way the exclusionary rule works. The core problem is what social
scientists call the error of "selecting on the dependent variable." To
test the hypothesis that variable $A$ (the exclusionary rule) causes out-
come $B$ (e.g., lost convictions), it is necessary to be able to estimate
more than just $B$: we need to know the number of times that $A$ did not
lead to $B$. Only in this way can we determine what factors tend to
result in the outcome we are concerned with, by also knowing which

\textsuperscript{42} Nat'l Inst. of Justice, The Effects of the Exclusionary Rule 9 (1982).
\textsuperscript{43} Id. at 10. Additional smaller studies revealed levels that were higher in San
Diego (8.5% in 1980); Los Angeles County, Pomona Office (11.8% in 1981); and Los
Angeles County, Central Operations Office (14.6% in 1981). Id. at 10–11.
\textsuperscript{44} Id. at 11. Davies, supra note 30, at 617–18, found that prosecutors reject only
0.8% of felony arrests due to illegal searches and 2.4% for drug cases.
\textsuperscript{45} Nat'l Inst. of Justice, supra note 42, at 13 (noting 32.5% in Los Angeles
County, Pomona; 29% in Los Angeles County, Central). Peter F. Nardulli, The Societal
594–96 (1983) found that 16.9% of motions to suppress physical evidence are
granted, but discounted this since these motions are only raised in 7.6% of cases. As
such, Nardulli concluded that suppressions represent only 0.69% of all cases lost
because of suppression of illegally seized evidence, and 2.9% of drug prosecutions.
\textsuperscript{46} Rep. by the Comptroller Gen. of the U.S., Impact of the Exclusionary
\textsuperscript{47} See id. at 14.
factors tend not to result in those outcomes. But the exclusionary rule never arises in cases where the police are actually deterred from searching a suspect, or where that search is unsuccessful, producing no inculpatory evidence.

This selection effect also has a distorting effect on the lens through which scholars analyze the exclusionary rule. The cases reaching a court that raise the exclusionary rule as an issue are necessarily those in which some evidence is found. Because of this, the development of the exclusionary rule has become focused on criminal defendants, and so it may seem natural to think of the Fourth Amendment as a right only of criminal defendants. But the Fourth Amendment was at least as much initially conceived of as a right of non-defendants against an overly intrusive state. Much of the point of the Fourth Amendment was to prevent baseless routinized searches that were not investigative in nature but rather were used as a mechanism of state harassment of everyday citizens. The difference between a police state and a constitutional democracy is not determined by what happens at trial, but whether the police can enter your home at will. But these types of infractions do not come to court through the criminal justice system—they only reach the judiciary through what is generally regarded as an inadequate civil remedy, 42 U.S.C. § 1983. Exclusionary rule precedent is thus developed without the courts ever seeing all of the instances that the Amendment was primarily designed to protect: preventing police harassment of innocent citizens. All of these cases are selected out and are only addressed indirectly through deterrence theory.

48 See Camara v. Mun. Court, 387 U.S. 523, 528 (1967) ("The basic purpose of [the Fourth] Amendment, as recognized in countless decisions of this Court, is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials."); Arnold H. Loewy, The Fourth Amendment as a Device for Protecting the Innocent, 81 Mich. L. Rev. 1229, 1240 (1983) (showing that the founders' concern was with preventing harassment of innocent citizens, not merely protecting the rights of defendants); L. Song Richardson, Arrest Efficiency and the Fourth Amendment, 95 Minn. L. Rev. 2035, 2071 (2011) ("Fourth Amendment jurisprudence is primarily concerned with prohibiting arbitrary invasions of privacy by the government.").

49 See Payton v. New York, 445 U.S. 573, 583 (1980) ("[I]ndiscriminate searches and seizures conducted under the authority of 'general warrants' were the immediate evils that motivated the framing and adoption of the Fourth Amendment."). For a different but related view, see William J. Stuntz, The Substantive Origins of Criminal Procedure, 105 Yale L.J. 993, 994-95 (1995), arguing that the primary purpose behind the Fourth Amendment was not "evaluating the privacy interest in jacket pockets or paper bags," but rather limiting "the government's power to regulate relevant conduct," and making it harder to prosecute objectionable crimes, such as heresy and sedition.

50 See infra Part III.C.
The following two sections demonstrate that the failure to establish the effectiveness of exclusionary rule deterrence is more than just a product of research design. Rather, the causal mechanisms that supposedly ensure police adherence to constitutional requirements have multiple points of frailty. Sections B and C show that the theory of police deterrence rests on a number of dubious assumptions regarding: information—that police know the law and the ramifications of its breach; incentives—that the police only have incentives to convict defendants, and not simply to arrest them or to engage in aggressive policing; and substitution—that police will not engage in perjury or other forms of avoidance. Section D then models the effect of the exclusionary rule, given these incentives.

B. Information and Incentives—Principal-Agent Problems

The claim that police are deterred from violating the Fourth Amendment due to the operation of the exclusionary rule assumes that police have the requisite information and incentives to be deterred. However, the evidence raises doubts that police generally know the law that they are meant to apply, or the consequences of its breach. In addition, those consequences are only tangentially related to police incentives: police performance is measured in terms of arrests, not convictions; some police may value harassing suspects; and police may have an incentive to protect the community from criminals and criminal activity through "aggressive policing" more than through conducting legal searches. These weaknesses in the theory of police deterrence are explored in turn.

The exclusionary rule can only be effective as a deterrent to police if the jurisprudence surrounding the rule is sufficiently clear that it can be understood and followed by those officers. But the exclusionary rule doctrine is "a vast jumble of judicial pronouncements that is not merely complex and contradictory, but often perverse," and so police officers have trouble understanding it. There is evidence to show that police officers do not know all the ins and outs of search and seizure law; as such, they are unlikely to be effectively deterred from committing violations since they are not aware of what many violations are.

A study by Heffernan and Lovely found that police officers performed only slightly better than chance in assessing the lawfulness of

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51 Amar, supra note 1, at 758.
52 See Oaks, supra note 21, at 731 ("[I]n terms of the complexity of the rules, the area of arrest and search and seizure is not a favorable one for a deterrent sanction to be effective.").
search scenarios based on major cases. The police tested had an average correct response in 57% of scenarios concerning the legality of intrusions and 47.5% on questions about the rules of search and seizure. They performed a little better than laypersons but were strongly outperformed by lawyers (who scored 48% on intrusions questions and 73% on search and seizure questions). Another study found that police officers and sheriff department officers were able to answer correctly only 64.5% and 64.2%, respectively, of hypotheticals based on the major search and seizure cases. Since it is fundamental to deterrence that the party intended to be deterred knows which acts are prohibited, such poor results raise fundamental doubts about whether there can be any deterrent effect.

For the exclusionary rule to work on any individual police officer, that officer would have to know when her actions resulted in exclusion. But not only do police not know the law they are meant to apply, studies suggest that a significant portion of police officers do not find out the repercussions of their own illegal searches. Orfield found that 85% of officers were informed when evidence was suppressed, but a more recent study found that fewer than 30% of officers were ever formally informed by the prosecutor or from their supervisor of an evidentiary exclusion.

The lack of knowledge of the law and the consequences of their own actions displayed by the police suggest that there is a principal-agent problem in the theory of deterrence. A principal-agent problem arises where one party, the agent, is meant to represent and promote the interests of the other party, the principal, but the agent is

54 Id.
55 See Perrin et al., supra note 18, at 728.
56 Heffernan and Lovely concluded that simplification of the rules of search and seizure also cannot fix this problem: even extensively trained officers were mistaken about 30% of the time. See Heffernan & Lovely, supra note 53, at 345, 354 tbl.13.
57 That is, specific deterrence, in contrast to the police force as a whole being deterred by the existence of the exclusionary rule—i.e., general deterrence. See Perrin et al., supra note 18, at 716.
58 Orfield, supra note 18, at 124.
59 Perrin, et al., supra note 18, at 723–24. Two thirds of respondent officers nevertheless heard of the court's ruling directly in court, but almost 5% never were informed of a judge's determination on at least one occasion. Id. at 723. Oaks agrees, stating that his observation of Chicago courts confirms police officers seldom hear about the decision to exclude or all of the reasons the judge gave for that decision. Oaks, supra note 21, at 730–31.
not reliable. This usually arises because of a lack of alignment between the interests of the principal and the agent, and from a lack of information on the part of the principal to know whether the agent is properly representing his or her interests.\textsuperscript{60} That is, principal-agent problems arise due to poorly structured incentives and asymmetric information—exactly the scenario that exists in relation to the exclusionary rule. If the principal is the State, whose interest, articulated by the courts, is in having a society run in accord with the Constitution, then the police are the agents who are supposed to represent and implement that interest. But even with the best of intentions, the police cannot be good agents if they lack knowledge of what they are supposed to be doing and whether they have done it. The principal-agent difficulties of deterrence theory are exacerbated when we look at the actual incentives of the police: it becomes clear that police do not always have the incentive to be the best possible agents.

In creating the exclusionary rule, the Court concluded that the police do not have the incentive to follow the Constitution, and so need to be deterred by the creation of a strict remedy. But it is far from clear whether the exclusionary rule creates the incentive for the police to be good agents. The exclusionary rule affects police incentives relating to successful convictions, but it has no impact on other forms of police utility, such as the exercise of police power for its own sake (e.g., harassment), or protecting the community through other means, such as aggressive policing to prevent crime.

There are tiers of agency in the principal-agent relationship between the police and the State: the police are answerable to their superiors, who are answerable to chiefs of police, the mayor, and so on up the line. As a result, the institutional incentive structure in which the police operate is often at odds with the theory of deterrence. Officers on the street are likely to be concerned at least as much with the positive or negative reactions of their direct superiors within the force as they are to the eventual admission or exclusion of evidence at trial. This has two important implications for deterring police. First, as Amsterdam noted from the FBI crime reports statistics, police departments “almost invariably measure their own efficiency in terms of ‘clearances by arrest,’ not by convictions.”\textsuperscript{61} This gives police an incentive to arrest suspects using a potentially illegal search, if following the rules of the Fourth Amendment would prevent


them from making an arrest. Second, although police superiors surely value successful convictions, they also are likely to “derive considerable utility from seizing drugs and weapons even if these may not be used in court.”62 This gives the police an incentive to search suspects for contraband even if they do not expect to arrest the suspect.

As such, the exclusionary rule fails to disincentivize illegal searches not aimed exclusively at development of evidence for eventual judicial trial. The intermediary role of police superiors in the agency relationship led Oaks to conclude from his interviews with police officers and police commanders that, “[s]o far as police command control is concerned, it is a notorious fact that police are rarely, if ever, disciplined by their superiors merely because they have been guilty of illegal behavior that caused evidence to be suppressed.”63

Consequently, the incentives the Supreme Court believes it is creating to deter police from Fourth Amendment violations are in fact out of alignment with the incentives the police actually face on a daily basis, as created by their direct superiors. This problem is arguably not simply one of agency, but one of moral hazard. Moral hazard occurs when one party acts as a decision-maker but does not bear the full brunt of the costs he or she imposes in making his or her decision, and benefits from acting contrary to the best interests of the principal, and the principal cannot fully monitor whether the agent is taking the level of care that is in the best interests of the principal.64 Since prosecutors rather than police bear the direct cost of the exclusionary rule, the police may gain utility from regularly engaging in conduct that risks convictions, in order to satisfy their superiors’ desire for aggressive policing. Given this distorted incentive structure, it should not be surprising that two scholars who directly observed policing activities found that 30% of the police searches they witnessed were in direct violation of the Fourth Amendment.65

Even when the police are concerned with convictions, deterrence may not have its intended effect, as many searches that violate the

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64 This cost arises in the form of a risk, and the decision maker fails to display the level of care she would take if bearing the responsibility for her actions. See Kenneth J. Arrow, Uncertainty and the Welfare Economics of Medical Care, 53 Am. Econ. Rev. 941, 961–62 (1963); Mark V. Pauly, The Economics of Moral Hazard: Comment, 58 Am. Econ. Rev. 531, 535 (1968).

Fourth Amendment can nonetheless lead to convictions. The exclusionary rule attempts to address whether a conviction is likely to flow from a search, but in fact it does little to address the many police activities that never fall under judicial scrutiny. For instance, a large proportion of arrestees are released without charges and most criminal prosecutions result in a guilty plea. In addition, illegally garnered evidence can nonetheless be used to prosecute third parties who lack standing to exclude, to impeach a defendant's or witness's credibility, to prosecute non-criminal cases, to induce a subject to become a police informant, or to find other evidence.

This is not to deny that convictions are important to the police. But it does suggest that the exclusionary rule will not be effective in cases where the police care about other factors and cannot realistically achieve their goals without potentially violating the Fourth Amendment. This will vary by the type of search the police seek to undertake. For one thing, police are more likely to violate when conviction is less important: the exclusionary rule is "most effective in discouraging illegal searches in cases involving serious offences, where conviction is important. Conversely, where the police believe that a policy of harassment is an effective means of law enforcement, the exclusionary rule will not deter their use of unlawful methods."

That does not, however, mean that the exclusionary rule will always be effective for serious crimes. Even within this category, the incentives created by the courts actually vary by the type of search being conducted. Alschuler argues that the exclusionary rule is "more likely to induce compliance with rules about how a search must be conducted than . . . when a search may occur," because there is little to lose for the police in conducting a search in violation of the Fourth Amendment that they otherwise could not exercise, and much to gain—recovering contraband, harassing a suspect, gaining a confiden-

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66 See Oaks, supra note 21, at 720 ("[E]ven among the small categor[ies] of arrests, less than [10%] of the defendants are charged" with a serious offense, and a "large proportion of arrested persons are released without any charges being brought.").

67 See Perrin et al., supra note 18, at 750 ("Police know that most cases will end in a plea of guilty or some disposition other than a contested trial, and thus, are not deterred in many (if not most) instances."); see also Oaks, supra note 21, at 723 ("A related doubt about the effectiveness of the exclusionary rule arises from the fact that a large majority of defendants plead guilty.").

68 See Oaks, supra note 21, at 734–35.

Whereas for a search that can constitutionally take place, it is important not to violate the rules because otherwise good evidence may be suppressed. This suggests that the exclusionary rule is not ineffective at controlling the manner of searches, only whether searches are conducted—but this is itself quite perverse, since the impact of failure to discourage an illegal search being conducted at all is far greater than controlling the manner in which an otherwise legal search will be prosecuted. As such, Alschuler concludes that the "exclusionary rule seems better able to enforce the rules that make less difference in people's lives." 

Overall, evidence shows that often police are concerned with arrests rather than convictions, with finding and confiscating contraband, and with arresting third parties. When such goals are pursued in violation of the Fourth Amendment, the evidence can nonetheless sometimes be used in court, for example against third parties, and even when much of the evidence produced may not be used in court, police will still often have an incentive to search for it. The exclusionary rule does not effectively deter its agents from violating Fourth Amendment rights.

The problem of police incentives is even more pronounced where, regrettably, some officers may derive utility from harassing suspects or even non-suspects. This deserves separate attention, since the hypothesized need for the exclusionary rule is that without the deterrence of the rule, police would have an incentive to systematically breach Fourth Amendment rights. But if this claim is true and police derive substantial utility from ignoring constitutional rights, the exclusionary rule will do nothing to prevent regular, even deliberate, incursions against innocent citizens. If, for example, police—or at least some police—enjoy harassing innocent citizens, then they will continue to do so regardless of whether evidence found on guilty citizens through similar methods would be suppressed.

Consider the stereotypical racist police officer. His first preference might be to harass young black men, find evidence against them, and have it accepted as evidence in court. But if the choice is between being able to harass young black men but not use any evidence found, versus only searching young black men in the legal manner and potentially having any evidence found admitted as evidence in court, the racist police officer may well prefer the former. Then the exclu-

71 Id. at 1371.
72 Id.
sionary rule does nothing to protect those young black men the officer is likely to target. 73

That this problem is real is supported by evidence that "hit rates"—that is, how often police successfully find evidence of criminality as a result of a stop or search—for whites are much higher than for blacks, yet police consistently stop and search blacks at significantly higher rates than whites. 74 The Supreme Court has recognized that the exclusionary rule does little to protect racial minorities from police harassment: "The wholesale harassment by certain elements of the police community, of which minority groups, particularly Negroes, frequently complain, will not be stopped by the exclusion of any evidence from any criminal trial." 75

To be concerned about this problem, it is not necessary to believe that the racist police officer is common, for two reasons. First, race is not the only criteria for harassment: police may systematically illegally search or seize poor white people, young people, gay people, the mentally ill, the homeless, or people who simply look unusual.

Second, the lack of protective effect arises not only to the police officer with malevolent intent but also for the much more common phenomenon of the good but mistaken police officer who nevertheless unlawfully detains many innocent people. 76 This is not just a

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73 In addition, it is not difficult to racially target or otherwise harass innocent civilians and still use any evidence found against them. Since Whren v. United States, 517 U.S. 806, 813 (1996), held that that violations of any traffic law can provide probable cause for police to detain motorists, even when the initial stop was a mere pretext for searching for evidence of a more serious crime, the police need only wait for a target to commit a minor traffic offence. This may extend beyond traffic stops: jaywalking, loitering, and other such laws could also be used to search individuals without any prior suspicion, "the very thing the probable cause standard is supposed to forbid." Stuntz, Uneasy Relationship, supra note 39, at 7.

74 See Richardson, supra note 48, at 2037–38 (summarizing hit rates in six different states and cities and showing that some minorities often are twice as likely to be stopped as whites, yet the hit rate for whites often is one and a half or more times greater). For a critique of whether these discrepancies in hit rates necessarily establish racial discrimination, see Bernard E. Harcourt, Rethinking Racial Profiling: A Critique of the Economics, Civil Liberties, and Constitutional Literature, and of Criminal Profiling More Generally, 71 U. Chi. L. Rev. 1275, 1299 (2004), arguing that whether racial profiling will decrease the amount of profile crime depends on the elasticity of each racial groups' willingness to offend.

75 Terry v. Ohio, 392 U.S. 1, 14–15 (1968) (footnote omitted).

76 See Wayne R. LaFave, The Smell of Herring: A Critique of the Supreme Court's Latest Assault on the Exclusionary Rule, 99 J. Crim. L. & Criminology 757, 769 (2009) ("[M]any more violations of the Fourth Amendment are the result of carelessness than are attributable to deliberate misconduct."). Nearly a third of searches Gould and Mastrofski studied were performed unconstitutionally, with almost none visible to the courts, and the majority of these constitutional violations "concentrated in a small
product of the good faith exception; even police officers without animosity to any individual or group will be significantly more likely to search or seize certain individuals more than others, based on often unconscious inherent assumptions about physical appearance.

Recent social science studies show that implicit bias is widespread. For example, when viewing an otherwise identical photograph that manipulates skin color, people are more likely to think that a person with dark skin tone has committed a crime than someone with light skin tone.77 Professor L. Song Richardson summarizes how these implicit biases cause people to absorb both conscious and non-conscious stereotypes and beliefs about certain social groups, along with attitudes and emotions about that group, and how such unconscious biases shape individuals' behavior "in ways that they are unaware of and largely unable to control."78 As such, officers who might not consciously use racial profiling or have any animosity to a given group nonetheless will differentiate unintentionally between individuals based upon their physical appearances and apparent racial categorizations.79 Thus, in addition to failing to deter deliberately harassing police behavior, the exclusionary rule also will not deter much of the large category of police violations of the Fourth Amendment that are not based on any animus, but rather based on error.

C. Perjury and Aggressive Policing—Substitution Effects

The previous section highlighted a number of weaknesses in the deterrence rationale for the exclusionary rule in terms of principal-agent problems. In particular, it illustrated the lack of clarity of the rule and its irrelevance to many of the incentives which govern day-to-
day police work. Another weakness of the theoretical case for deterrence is its failure to consider substitution effects.

If, as deterrence theory assumes, police will have an incentive to violate the Fourth Amendment but will only refrain from doing so because of the exclusionary rule, it follows that if there are preferable alternatives available to following the law, the police will substitute those alternatives. Two well-substantiated forms of substitution that the police engage in are of particular concern: police perjury and aggressive policing.

A number of scholars have concluded that the exclusionary rule drives the police to commit perjury, because when a police officer "sees the case law as a hindrance to his primary task of apprehending criminals, he usually attempts to construct the appearance of compliance, rather than allow the offender to escape apprehension."80 Due to the desire of police administrators to ensure effective policing, not simply evidence collection, as addressed above, combined with the ambiguity of many of the tests in this area of the law, Skolnick observed that the average police officer is able to exercise choice in how he reconstructs the various factors that could indicate reasonable suspicion or probable cause. As such, rather than having the misfortune to have to report to a superior that a suspect escaped or disposed of evidence because the officer failed to conduct a search that could later have potentially been held to be a violation of the Fourth Amendment, the officer is more likely to simply undertake the search and finesse the facts later in court if necessary.81

A study of narcotics arrests before and after Mapp found that in the wake of the Court's decision, arrests made where drugs were found on the person decreased, as exclusionary rule proponents would predict. However, at the same time arrests for drugs that police claimed to have found in the hand or dropped to the ground rose significantly. Since there is no other reason why there should be a sudden increase in drugs arrests of this form, that do not require a search, the study's authors concluded this result could only be explained through police perjury.82

Similar results have arisen from studies that have attempted to determine qualitatively the effect of deterrence by interviewing police chiefs, prosecutors, and other members of the arrest process. Orfield found that 95% of Chicago police and 97% of judges, public defenders, and prosecutors believed that police officers change their testi-

81 See id. at 214–15.
82 See Comment, supra note 33, at 95–96.
mony to avoid evidence exclusion and that many judges failed to suppress evidence when they knew searches were illegal. Orfield argued that this evidence of widespread perjury constituted a major limit on the deterrent effect of the exclusionary rule.

The second substitution effect is aggressive policing. Even the Warren Court has acknowledged that the exclusionary rule is often incapable of preventing police conduct that systematically violates the rights of innocent citizens more generally, with or without ill intent, due to its failure to prevent police from pursuing other police activities.

In some contexts the rule is ineffective as a deterrent. Encounters are initiated by the police for a wide variety of purposes, some of which are wholly unrelated to a desire to prosecute for crime. Doubtless some police ‘field interrogation’ conduct violates the Fourth Amendment. But a stern refusal by this Court to condone such activity does not necessarily render it responsive to the exclusionary rule. Regardless of how effective the rule may be where obtaining convictions is an important objective of the police, it is powerless to deter invasions of constitutionally guaranteed rights where the police either have no interest in prosecuting or are willing to forgo successful prosecution in the interest of serving some other goal.

These “other goals” Chief Justice Warren referred to include both legitimate and illegitimate policing goals. Legitimate goals include a desire to protect the community from criminals and criminal activities. There are many police goals that are not directed at arrests or convictions per se, but rather at dampening crime. However, officers may pursue legitimate goals unlawfully. In Orfield’s study, police officers explicitly stated that some illegal searches were conducted not due to a failure to understand the law, but because they wanted to get weapons or drugs “off the street.” Without collecting any evidence, police officers “have plenty of other incentives to violate the Fourth Amendment, such as preventing a suspect from

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83 See Orfield, supra note 18, at 97, 96 (respectively).
84 Id. at 115 (discussed in more detail at infra Part III).
85 Id. at 123.
86 Terry v. Ohio, 392 U.S. 1, 13-14 (1968) (footnotes omitted).
fleeing, confiscating contraband, and making certain that no one in the vicinity is armed.\textsuperscript{88}

In addition, there are activities that are clearly related to police work, but are less clearly legitimate police goals. Illegitimate goals include but are not limited to: harassment of the type discussed above, using confiscation as punitive sanction, arrest for the purpose of controlling prostitution, recovering stolen property, and “keeping the lid on” a high crime area or “satisfying public outcry for visible enforcement.”\textsuperscript{89} The line between the two categories is not always clear: a legitimate motivation can blend into an illegitimate goal through a dubious strategy.

Altogether, these various types of conduct constitute a category of police patrolling labeled “aggressive crime control.” This occurs when officers

patrol their district looking for crimes being committed. . . . Their primary aim is to seize guns and drugs, and to make as many arrests as possible in order to “make police presence felt.” The goal is to generate a perception of aggressive police activity . . . [A]ctually getting convictions is a secondary goal often conflicting with their primary objectives [of suppressing crime].\textsuperscript{90}

The exclusionary rule does nothing to prevent aggressive crime control being undertaken in a way that is illegal under the Fourth Amendment, since these activities are in no way directed at the eventual admission of evidence at trial.

In fact, the exclusionary rule may actively encourage such illegal police activity. One study reported that \textit{Mapp} led to an increase in the use of “preventative patrols”—police searches aimed not at arrest and prosecution, but at confiscation of weapons and drugs.\textsuperscript{91} This is quite understandable: consider a scenario where the police believe that a suspect is breaking the law but, due to the stringency of the exclusionary rule, they anticipate that they will not be able to use the evidence at trial; if instead there was some more proportional remedy, the police would have an incentive to violate the law as little as possible while still obtaining the evidence. But with an all-or-nothing exclusionary rule, if the police decide to violate the Fourth Amendment, there is little incentive to minimize that violation.

\begin{footnotesize}
\begin{itemize}
  \item \textsuperscript{89} Oaks, \textit{supra} note 21, at 722.
  \item \textsuperscript{90} Orfield, \textit{supra} note 18, at 86.
  \item \textsuperscript{91} Comment, \textit{supra} note 33, at 100.
\end{itemize}
\end{footnotesize}
Interestingly, police officers admit to this behavior in a significant number of cases. Heffernan and Lovely found that 15% of police officers interviewed admitted that they would intentionally conduct an illegal search. This probably understates the extent to which police willfully violate the Fourth Amendment, since it is an admission against interest.

The effectiveness of the exclusionary rule’s deterrence of police violation of the Fourth Amendment is broadly recognized as an empirical question. However, like many such questions, it is not amenable to empirical testing because we can only observe the rule’s failures—cases where police searches arguably violate the Fourth Amendment, and exclusion is sought—but the cases where deterrence actually works are invisible. Turning from empirics to theory, it is evident that the logic of police deterrence is not straightforward. The exclusionary rule can only work where the law and its consequences are understood by police, and where those consequences actually influence police utility. The prospect of exclusion does nothing to deter police when their activities are not directed towards producing admissible evidence at trial, or where the person whose rights are violated lacks standing to object to the production of evidence. Further doubt is cast onto the impact of the exclusionary rule by the well-documented phenomena of police perjury and the shift of police resources towards “aggressive crime control” and away from pursuing convictions.

D. A Formal Economic Model of the Exclusionary Rule at the Policing Stage

This section creates a formal model that shows with precision how the beliefs and preferences of police officers will play out under the incentives created by the Supreme Court through the exclusionary rule. It considers two scenarios, with and without the exclusionary rule, for a variety of different types of officer incentives discussed above. In particular, the model considers the possibilities, as much of the literature argues, that most police officers value obtaining evidence even if it would not be admissible and value undertaking searches as part of aggressive policing, even when they expect to find no evidence. If the exclusionary rule is to be effective, the harm from exclusion must more than offset these benefits of illegal searching. By varying the utilities and expectations of evidence being admitted and leading to convictions, the model shows that even the ideal police

92 Heffernan & Lovely, supra note 53, at 346.
93 See Perrin et al., supra note 18, at 683.
officer, who gains no benefit from unsuccessful searches of suspects and who does not want to search if evidence will be excluded, will nonetheless still have an incentive to illegally search in most cases, despite the alleged deterrent effect of the exclusionary rule.

I begin by comparing the interests of police officers when there is no exclusionary rule, as assumed by the Supreme Court, and compare the resulting outcome to that under the exclusionary rule, when our newly incentivized police officer receives negative rather than positive utility from conducting searches on innocent citizens. In both scenarios, the police officer faces a choice between searching a suspect she believes has some chance of holding contraband (I examine what that probability may be below), or choosing not to search the suspect. I assume that the officer has little control over the admissibility of evidence—this scenario thus examines the choice of whether to do a search or not, facing uncertainty as to its constitutionality, rather than the possibility of waiting and trying a more reliable form of search later, e.g., obtaining a warrant. As such, here I am considering a simple police investigative scenario, whereby an arrest will depend entirely on the success of the search—such as suspicion of possession of contraband. In the next Part, I consider a more complex search scenario, whereby an arrest and prosecution will occur regardless of whether the evidence is admitted or excluded—such as a murder investigation.

First, I describe the utility of the police officer without the exclusionary rule (PO-ER) in general mathematical terms, so as to capture the overall shape of preferences, whereby the police officer gains positive utility from searching citizens, whether or not that search produces evidence, but also from genuine convictions:

\[
U_{PO-ER} =
\begin{cases}
1 & \text{if Search and finds Admissible Evidence (S, AE)} \\
x & \text{if Search and finds No Evidence (S, NE)} \\
x & \text{if Search and finds Excluded Evidence (S, EE)} \\
0 & \text{if No Search and believes No Evidence (NS, NE)}
\end{cases}
\]

94 For comprehensiveness, the outcome (S, EE) is set to \(x\) instead of 1, to capture the possibility of some exclusion even without an automatically applied exclusionary rule, as in other countries, although \(x = 1\). For example, in Argentina, an exclusionary rule (founded on ethical grounds, rather than utilitarian rationales of deterring police misconduct) applies only to serious police misconduct, and occurs in a context where police have "the power to stop, detain, or arrest any one" in public "as long as there are strong indications of guilt." Criminal Procedure 7, 18–19 (Craig M. Bradley ed., 2d ed. 2007). Similarly, in Canada, exclusion only applies where an "admission of the evidence would bring the administration of justice into disrepute," a burden that rests with the accused. Id. at 65.
{−z if No Search and believes Evidence (NS, E)
where \(1 \geq x > 0 > -z\)

Since the officer will not find out whether the suspect actually had contraband if the search is not undertaken, the officer only has her unconfirmed beliefs in that scenario. For \(PO-ER\), the officer gains positive utility from conducting a search even when finding no contraband \((x > 0)\), capturing the fact that the officer enjoys harassing some citizens (the possibility of a racist police officer) or engaging in aggressive policing (requiring no ill will, just a belief that crime rates are high and require regular searches to suppress illegality). However, the officer is not entirely corrupt, and still prefers gathering evidence to not gathering evidence \((1 > x)\), and is more dissatisfied letting a suspect go if she genuinely believes the suspect was committing a crime \((0 > -z)\).

In contrast, the utility of the police officer under the exclusionary rule \(\text{(POER)}\) is:

\[
U_{\text{POER}} = \begin{cases} 
1 & \text{if Search and finds Admissible Evidence (S, AE)} \\
 x-y & \text{if Search and finds Excluded Evidence (S, EE)} \\
x & \text{if Search and finds No Evidence (S, NE)} \\
0 & \text{if No Search and believes No Evidence (NS, NE)} \\
-\frac{z}{\text{-}} & \text{if No Search and believes Evidence (NS, E)}
\end{cases}
\]

where \(x > 0, 0 > -z, 0 > x-y\)

The exclusionary rule does nothing to change the fact that there is positive utility not only from searching and finding contraband and searching when there is no evidence (as shown below, even if we disregard this factor, the results hold), nor can it combat the negative utility from not searching when the officer believes there is contraband \((-z < 0)\). The only difference is that the officer now gets negative utility from conducting a search and finding contraband that is subsequently excluded, overcoming the benefit of getting contraband off the street \((x-y < 0)\). That is, I assume what the Supreme Court presumes is true but that much of the literature disputes: that the penalty of exclusion of evidence more than overcomes the benefit of getting contraband off the streets or finding other evidence. As such, we are giving the benefit of the doubt to the effectiveness of the exclusionary rule.

The full range of strategies, given these utilities, is set out in Figure 1. Note that for completeness, this Figure includes off-the-equilibrium-path outcomes, e.g., no evidence is found but it is admitted or excluded.
We cannot simply compare the cells horizontally, as would normally be done in a game matrix, since the officer does not find out if the suspect has contraband or not if she does not search. As such, we compare the probabilistic outcome that occurs when a search is undertaken with the probabilistic beliefs of the police officer when a search is not undertaken.

Instead of considering the utilities and likely strategies of the suspect, the perceived probability of the suspect having evidence is determined by nature, as is the probability that the court will exclude or admit the evidence.

Let $p$ be the probability of the suspect having drugs, and $1 - p$ the perceived probability of the suspect not having drugs.

Let $q$ be the probability that the evidence will be admitted, and $1 - q$ the probability that the evidence will be excluded.

We can now examine the strategies an officer will take under each scenario, given the utilities.

**Without the exclusionary rule:**

PO-ER will search as long as: $1pq + xp(1 - q) + x(1 - p) \geq -zp$

Since $x > 0$ and $-z < 0$, the left hand of the equation is always $\geq 0$,

and positive as long as $p > 0$; the right hand of the equation is always negative when $p > 0$ and zero if $p = 0$. As such, the officer has a dominant strategy to always undertake the search, even if she believes that there is zero chance of the suspect possessing contraband.

As such, the Supreme Court’s claim in *Mapp v. Ohio* was correct that police will have an overwhelming incentive to conduct searches regardless of whether it is at all likely that such a search will produce evidence of guilt. However, this model is premised on the absence of the existence of any other remedy—the Supreme Court in *Mapp* asserted that no other remedy could effectively alter these undesirable police incentives; if that is true, then the result follows. But this argument is rather circular, assuming its own conclusion: that is, no other
remedy exists that would change these incentives to search, and so the incentive to search will be dominant.

Putting aside the question of alternative remedies, does the exclusionary rule change the dominant strategy to always search any suspect, regardless of how unlikely it is that the search will produce admissible evidence of guilt? Yes, but not as much as the Court assumes it will.

**With the exclusionary rule:**

\[ \text{POER will search as long as: } 1pq + (x - y)p(1 - q) + x(1 - p) \geq -zp \]

That is:

\[ yp(1 - q) \leq pq + xp(1 - q) + x(1 - p) + zp \]

This equation may look highly abstract, but it is in fact very informative. We can now vary the relative probabilities of the suspect having drugs, and of the evidence being admitted, as well as the relative values of the benefit of getting drugs off the street, the harm perceived by police officers in letting suspects with contraband leave without being searched, as well as the penalty of the exclusionary rule being exercised.

If \( p = 0 \), that is, there is no chance of the suspect having contraband, \( \text{POER} \) will nevertheless search as long as \( 0 < x \), which the literature says it is: finding contraband and making arrests are valuable to the police, with or without convictions. We can see this not only by reducing the equation, but by examining the \textit{ER} subgame above (the top four cells of the \textit{ER} matrix): when there is no evidence, the choice is between searching and receiving \( U = x \) and not searching and receiving \( U = 0 \). This supports the claim in the literature that the exclusionary rule encourages aggressive policing, and because it does nothing to address the incentives of the police to nevertheless search when no evidence is found or likely to be found, the exclusionary rule does nothing to protect civilians from these sorts of harassing searches.

Interestingly, if \( q = 0 \), that is there is no chance that any evidence found will be admitted, \( \text{POER} \) will still search as long as \( y < x/p + z \). This means that as long as the perceived harm from allowing suspects to escape with contraband is high, \textit{or} if aggressive policing is highly valued, conditional on the probability that there is contraband to be found, \textit{or} if the harm from exclusion is adequately low, the police will still search. Thus the effectiveness of the exclusionary rule in preventing searches \textit{even when it is certain that the evidence will be excluded}, still hinges on some strong assumptions about police caring considerably more about the exclusion of evidence than other factors, such as letting criminals escape with contraband. As we saw above, these assumptions are strongly questioned in the literature.
When, instead of dealing in extreme conditions when either \( p \) or \( q \) is zero, we let \( p = \frac{1}{2} \) and \( q = \frac{1}{2} \), then the police will search as long as \( y < 1 + 3x + 2z \). So if the police perceive the odds of a suspect possessing drugs as 50:50 and the chances of the court upholding a search under these conditions as also 50:50, then police will only refrain from searching if the penalty of having evidence excluded in any case is greater than the value of finding drugs on the suspect and having that evidence admitted \( \text{plus} \) three times the value of seizing the evidence that cannot be used \( \text{plus} \) twice the inverse of the harm of letting contraband go due to refraining from searching. This seems a very high hurdle, and is unlikely to stop the police searching in any reasonable case.

This becomes especially clear if, under the same circumstances, we make the simplifying assumption that \( z = 1 \), such that the perceived harm of letting a suspect escape without being searched when the police believe he has contraband is equal to the value of searching and finding evidence that is admissible. Even if we completely discount the value of seizing drugs that are not admissible, letting \( x = 0 \), then the police will only not search if \( y > 3 \). That is, the harm of having evidence excluded would have to be three times the value of seizing evidence and having it admitted, even if there is no value in simply maintaining order through regular searches for illegal drugs.

This suggests that Supreme Court justices expect too much from the exclusionary rule: if their own assumptions about police incentives prior to the exclusionary rule are correct, then the incentive to search will still be strong, even with the exclusionary rule. The intended effect of the exclusionary rule will only work under very strict assumptions about police incentives. When the odds of successful search and admissibility are 50:50, the rule will have no effect unless the police care three times as much about admission than they do about letting a criminal escape with contraband they believe he probably possesses.

As \( q \) decreases, and thus it becomes more likely that evidence will be excluded—that is, as the exclusionary rule is made more stringent—the incentives for the police to search do diminish. However, the incentive to search is still strong. For instance, if all other values are the same as in the last example, but we let \( q = \frac{1}{4} \), then the police will still search unless \( y > 1 \frac{1}{2} \). So keeping \( x = 0 \), even as \( q \) decreases, the penalty of the exclusionary rule still has to outweigh the expected benefit of a successful and fully admissible search by 50%.

The only way that such a condition would be met is if the police as a whole are extremely risk-averse regarding exclusion—but this is an assumption for which there is no evidence. In fact, as seen above, interviews with police officers and their supervisors strongly suggests
the contrary: they fear letting a guilty suspect go with evidence or contraband far more than they fear any possible ramifications of the exclusionary rule. This strongly suggests that in fact $z > y$. If that is true, then POER will once again have a dominant strategy to search, even with the exclusionary rule, and even on the toughest assumptions, namely if $x = 0$, $p = 0$, $q = 0$. Thus if the literature is correct that police institutional incentives are such that they would prefer to risk exclusion of evidence than to risk letting a suspect escape with evidence, then the exclusionary rule will never work.

The Supreme Court expects the exclusionary rule to do a lot of work: for it to overcome the incentive to police aggressively, overpowering any positive utility from conducting a search even when finding no contraband—both for officers who enjoy harassing some citizens as well as honest police officers who believe regular searches will reduce crime—and overwhelming the disutility of allowing a suspect to proceed unchecked when the officer genuinely believes the suspect was committing a crime. We have seen that in common circumstances, such as when there is a 50:50 perceived chance of both the suspect possessing evidence and of that evidence being admissible, the exclusionary rule has to do even more work, providing three times the utility of these other police incentives. This model explains what much of the empirical literature has found: that the Supreme Court expects too much, and the exclusionary rule simply cannot provide the protection that the Court claimed it would in Mapp. It does nothing to protect innocent citizens from police harassment that is not aimed at developing evidence, it does nothing to protect minorities from racist police officers, or any other such malicious intent, and it often will not protect suspects from searches by well-meaning police officers who genuinely aim to reduce crime on the streets. We will see in the next Part that, in addition, the exclusionary rule actually harms the interests of those defendants most likely to be innocent.

II. THE EFFECTS OF THE EXCLUSIONARY RULE IN THE COURT ROOM

The effect of the exclusionary rule at the trial level has gone largely unexplored in the exclusionary rule literature, which focuses overwhelmingly on policing. Such myopia misunderstands the nature of the equilibrium the Court is attempting to create: if the exclusionary rule is undermined by jurors at the court stage, it will have no effect at the policing stage, as there will be no penalty for unconstitutional searches, and thus no deterrent effect. Any deterrent effect of the rule at the policing stage will unravel if it is ineffective at the trial stage. Thus the operation of the rule at the court stage should in fact
be a core focus of analysis, even if the Court only cares about the policing stage. This Part uses the extensive body of social psychology empirical literature on juror behavior, akin to behavioral economics, as well as game theoretic models of juror behavior, to map the effects of the exclusionary rule on the trial stage.

The conceit of the exclusionary rule promoted by the judiciary is that jurors do what they are told—that when instructed, jurors can and will simply shut their minds to any improper evidence.\textsuperscript{95} However, this is an acknowledged pretense: Judge Learned Hand referred to the exclusionary rule as “the recognized subterfuge of an instruction to the jury to confine its use” of evidence, a futile exercise because it amounts to a “recommendation to the jury of a mental gymnastic which is beyond, not only their powers, but anybody’s else.”\textsuperscript{96} The reason is that the exclusionary rule leads to some number of pieces of evidence being excluded from the jury. The premise of this exclusion is that the trial court can control what information the jury receives. But that process of control itself provides information to the jury.

When it comes to explicit retraction of evidence through instructions by judges to limit the use of evidence already presented—either ruling the evidence completely inadmissible or ruling the evidence only be used in a certain manner, such as for credibility alone\textsuperscript{97}—the frailty of the passive juror assumption is obvious and well-documented. The proverbial instruction not to think about elephants only emphasizes the relevance of elephants.\textsuperscript{98} Empirical studies have repeatedly shown that these instructions do not in fact restrict jurors’ consideration of the available evidence.\textsuperscript{99} This effect is so widely recognized that there is a literature devoted to understanding the reasons for the limits of judicial instructions to ignore evidence.\textsuperscript{100}

\textsuperscript{95} See Cruz v. New York, 481 U.S. 186, 191 (1987) (“[T]he general rule [is] that jury instructions suffice to exclude improper testimony . . . .”)
\textsuperscript{96} Nash v. United States, 54 F.2d 1006, 1007 (2d Cir. 1932). Justice Jackson agreed, calling such a claim “unmitigated fiction.” Krulewitch v. United States, 336 U.S. 440, 453 (1949) (Jackson, J., concurring).
\textsuperscript{97} See Fed. R. Evid. 105.
\textsuperscript{98} This thought process is called “the theory of ironic processes of mental control.” See infra note 100.
\textsuperscript{100} These include the following: Belief perseverance—“once individuals form a belief, the belief becomes highly resistant to change and influences how they perceive
Results show that inadmissible evidence impacts verdicts in the direction of the content of that evidence that is meant to be ignored—by as much as a 40% change in the probability of conviction.101

More often, the exclusionary rule is exercised not through withdrawal of admitted evidence but through non-admittance of that evidence in the first place; however the implications of these results for the exclusionary rule have not been previously explored. Even when no evidence is admitted—when an exclusion motion is brought at pretrial—there is often still evidence of exclusion having occurred: even without hints such as continued objections or whispered conferences between judges and attorneys, there will be holes in prosecutor’s cases that suggest evidence is missing. Jurors know of the existence of the exclusionary rule, and thus of its potential operation to withhold information from them.102 When information is excluded, the story is not going to be complete; but it is the jurors’ job to make sense of the case before them, to fill in the blanks in that incomplete story, something they are “strongly motivated” to do correctly.103 They draw

and construct future information.” Id. at 691. Hindsight bias—“once the outcome to a particular event is known, individuals are prone to overestimate the likelihood that the outcome would have occurred.” Id. at 692; see also Jonathan D. Casper et al., Juror Decision Making, Attitudes, and the Hindsight Bias, 13 L. & HUM. BEHAV. 291, 306–07 (1989) (“Despite an explicit judicial instruction to set aside outcome information in deciding upon award, jurors do not appear to do so, and this effect seems to be produced by the ways in which jurors process, encode, and recall the testimony in the case.” (footnote omitted)). The theory of ironic processes of mental control—the mental processes engaged in to avoid thinking about a forbidden topic are the same thought processes necessary to monitor possible recurrence of the thought, which leads to the ironic outcome of increased mental accessibility to that thought, which in turn increases its tendency to influence the judgment. See Lieberman & Arndt, supra note 99, at 697–98; Sharon Wolf & David A. Montgomery, Effects of Inadmissible Evidence and Level of Judicial Admonishment to Disregard on the Judgements of Mock Jurors, J. APPLIED SOC. PSYCHOL., 7, 205–19 (1977). Reactance theory—when individuals perceive that their ability to engage in an activity is threatened, they become psychologically aroused and react against that restriction. See Lieberman & Arndt, supra note 99, at 693.


inferences from gaps in the evidence, they receive and interpret cues throughout the course of the trial, and they bring in their own prejudices and assumptions, including assumptions about the operation of the legal process.\textsuperscript{104} This Part shows that jurors draw implications from the absence of evidence, and that these implications have serious ramifications: creating errors, systematic biases, and even adverse selection. Each of these effects is discussed in turn in the following sections.

A. Implications from the Absence of Evidence

There is strong evidence in the civil and criminal contexts that jurors not only disregard commands to ignore evidence, but also that they make inferences from silence, i.e., from the absence of evidence. Evidence of whether a person has insurance is inadmissible as evidence, in both federal and many state rules of evidence.\textsuperscript{105} Similarly, concerns that jurors will vary damage awards on the basis of attorney contingency fees have led to this information being kept from jurors. Federal Rules of Evidence and some state rules also prevent revelation of settlement negotiation and settlements by one of multiple defendants, so as not to influence jurors' expectations—either of likely defendant guilt or of plaintiffs overreaching in the face of adequate compensation.\textsuperscript{106} Yet studies have shown that even without any evidence of these topics being introduced, jurors will simply import their own knowledge about insurance, contingency fees, and other factors. Worse still, they will also import their own inaccurate beliefs about each of these issues.

\textsuperscript{104} See Diamond, \textit{supra} note 103, at 48–51 (summarizing the literature, including archival studies of jurors, trial surveys of jurors, surveys of judges and attorneys, simulations, and a videotaped study of actual jury deliberations).

\textsuperscript{105} \textit{Fed. R. Evid.}, 411 ("Evidence that a person was or was not insured against liability is not admissible upon the issue whether the person acted negligently or otherwise wrongfully.").

In controlled mock juror studies, surveys of actual jurors, and observation of actual jurors' process of deliberation, jurors make frequent references to topics that are forbidden for them to consider, such as insurance coverage and attorney's fees. For instance, Diamond and Vidmar found that actual jurors discuss insurance in 85% of jury deliberations, and in 80% of cases it was a spontaneous discussion by the jury, not in reference to witness statements at trial. Attorney's fees were spontaneously discussed in 83% of cases. In several cases, discussion of insurance "had a clear impact on the verdict and in others an effect on the verdict cannot be ruled out." Diamond and Vidmar conclude that although the law treats juries as passive participants who will ignore available but inadmissible evidence, doing so is contrary to common sense, and in fact jurors will "fill gaps in evidence with inferences based on their understandings."

As a result, many have concluded that blindfolding, like exclusion, is ineffective because jurors do assume insurance coverage. This is unavoidable, because the notion of blindfolding is inherently contradictory: "Information is withheld from jurors to prevent it from adversely affecting their decisions, yet blindfolding is effective only if jurors desist from speculation and inference—and given the lack of clarity on many complex legal issues and jurors' natural tendencies to

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107 The overwhelming majority of juries discussed plaintiff's insurance and defendant's insurance—84% and 75%, respectively—and a significant number discussed attorney's fees and pre-trial settlements—48% and 23%, respectively. Id. at 209. Only 4% of juries avoided discussion of any of these factors. Discussions included whether an award should be reduced or increased because of presumed insurance. Id. at 213-14.

108 Guinther collected survey evidence from jurors in thirty-eight civil trials. He found that 54% of respondents reported that they expected the civil defendant to have insurance. Only 4% and 2% respectively made that determination based on testimony or discussion in the court room before the trial began; 94% declared that they knew "from personal experience that such people or businesses usually carry insurance." John Guinther, The Jury in America 299 (1988). Of those who believed that the defendant carried insurance, 29% reported that the belief made a difference in their verdict to some extent. Id. In addition, 29% reported discussing any insurance or worker's compensation that the plaintiff might have, and 42% reported that the belief made a difference in their decision. Id. at 303.

110 Id. at 1876.  
111 Id. at 1884.  
112 Id. at 1898.  
113 Id. at 1894.  
114 Id. at 1862.
make sense of these complexities, both speculation and inference are likely."\textsuperscript{115}

As such, blindfolding is only appropriate "when jurors are unlikely to have expectations about information which is likely to cognitively restructure their perceptions of other evidence."\textsuperscript{116} But it is futile when jurors can be expected to come to trial with knowledge that will lead them to speculate about information being withheld from them, as they do regarding insurance and attorney's fees.\textsuperscript{117} Research on criminal exclusion suggests the same conclusion applies to evidence excluded under the exclusionary rule.

Jurors are willing to make similar inferences from silence in the criminal context. When jurors find out the outcome of a search—whether evidence of the crime was found by the police or not—this significantly affects their interpretation of ambiguous and missing evidence. If jurors know that a search is successful, it makes them more likely to interpret other testimony in a manner that favors the police. This knowledge does so primarily "by virtue of its effect on interpretation of ambiguous or missing elements in the testimony."\textsuperscript{118} That is, jurors will make inferences about missing evidence that they expect to see. Once again, explicit judicial instructions not to do so are ineffective.\textsuperscript{119}

Even when jurors have not seen the evidence, they are subject to a number of triggers which are likely to activate their general expectations about the operation of the exclusionary rule. The most obvious triggers are witnesses being steered away from particular topics, or hushed sidebar conversations. However, another pervasive trigger is a prosecution narrative that does not quite make sense. For example, in a murder trial without a murder weapon when neither side mentions a search of the defendant's home, it stands to reason that a search was conducted but its proceeds excluded. It does not make sense that the police would not search the defendant's home if they could not otherwise locate the murder weapon. It does not make sense that the defense would fail to mention that a search was con-

\textsuperscript{115} Greene et al., \textit{supra} note 106, at 199.

\textsuperscript{116} Diamond & Vidmar, \textit{supra} note 109, at 1906.

\textsuperscript{117} \textit{Id.} at 1907. For a summary of arguments for and against the exclusionary rule in this context, compare Martin A. Schwartz, \textit{Should Juries Be Informed that Municipality Will Indemnify Officer's § 1983 Liability for Constitutional Wrongdoing?}, 86 IOWA L. REV. 1209, 1224–26 (2001) (justifying insurance exclusion), with \textit{id.} at 1226–28 (criticizing insurance exclusion).

\textsuperscript{118} Casper et al., \textit{supra} note 100, at 306.

\textsuperscript{119} \textit{Id.} at 306–07.
ducted and no murder weapon was found. Therefore, jurors seeking to determine the defendant's actual guilt or innocence, and primed with a basic awareness of the exclusionary rule's existence, may rationally infer that the weapon was found in the defendant's possession but excluded (but they make errors in this assessment, as discussed below).

There are three effects of jurors making inferences from implicitly excluded evidence, which are described in the following sections. The first is juror resistance: defendants who benefit from the operation of the exclusionary rule will not receive the full benefit of exclusion; they will not be returned to a supposedly neutral position, but for the violation. The second is juror error: defendants who do not benefit from the operation of the exclusionary rule will nonetheless often be presumed to have benefited, and also have the burden of proof on the prosecution discounted as if there had been such evidence excluded. The third is perverse screening: the cost of these inferential errors is not randomly distributed between all defendants; if the failure to take advantage of the exclusionary rule is correlated with actual innocence, then jurors will systematically overestimate the existence of evidence of guilt against the innocent.

B. Juror Resistance

Jurors defy the mandate to ignore evidence made inadmissible under the exclusionary rule in a number of ways: express consideration of the excluded evidence; attaching increased weight to other similar evidence; and notionally complying with the instruction to exclude but discounting the plaintiff or prosecutor's burden of proof.

Professor Kenworthey Bilz tested whether participants, acting as mock jurors/judges, would apply the exclusionary rule when they were obliged to by law. Bilz deliberately designed the scenario such that exclusion was clearly the appropriate decision, yet she found that only a little under 50% of study participants were willing to apply the exclusionary rule. This result arose even though the study involved participants who were mostly law students and lawyers, who are trained to respect the law. This suggests that potential jurors who

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120 For a discussion of the difference in the claims of this kind that defendants can make according to whether the exclusionary rule was exercised or not, and the significance of this difference, see infra Part III.B.


122 See id. (manuscript at 49).
know they should be applying the exclusionary rule, and even those with legal training, often do not follow the dictates of the exclusionary rule—in fact almost half the time the rule was ignored. If jurors are commonly unwilling to apply the exclusionary rule, it is equally likely that they will not fulfill their duty to ignore evidence that they have inferred has been excluded by a judge.

To some, this might suggest that courts need to be more vigilant in ensuring that excluded evidence is never mentioned in front of the jury. However, this solution does not address the true heart of the problem: even without a whisper of a particular piece of disallowed evidence, jurors will make inferences from the absence of evidence. In addition, the process of being more vigilant can make the problem worse: there is strong evidence that instructions not to infer or consider excluded evidence often backfires, resulting in jurors placing more reliance on the inadmissible evidence than they would without any such instructions. If jurors retaliate against judicial instructions by giving the evidence more consideration than they would have if no instructions had been given, and the more strongly-worded the judicial instructions are, the more this effect occurs.

Worse yet, an inference of exercise of the exclusionary rule can also taint subsequent evidence of innocence at trial. Kassin and Sommers found that taped telephone confession evidence not only was considered incriminating at the time when the evidence was given (as tested on a handheld dial response measurement device), it also altered the way jurors perceived subsequent evidence. Of particular note, jurors for whom the evidence was inadmissible due to the exclusionary rule interpreted subsequent evidence as considerably more incriminating. So if jurors know or infer that the exclusion-

\[123\] See Lieberman & Arndt, supra note 99, at 678 ("Several social psychological theories offer potential explanations as to why jurors are unable to ignore inadmissible information and why they sometimes pay greater attention to this evidence when an admonition is given than when a judge says nothing at all.").

\[124\] See id. at 695 ("[J]urors may not only fail to ignore the evidence but may also focus additional attention on it because they see it as being an extremely important piece of information."); Wolf & Montgomery, supra note 100, at 216-17.


\[126\] See id.; see also Kurt A. Carlson & J. Edward Russo, Biased Interpretation of Evidence by Mock Jurors, 7 J. EXPERIMENTAL PSYCHOL.: APPLIED 91, 91 (2001) ("In spite of clear instructions to ignore prior beliefs, general plaintiff or prodefendant attitudes influenced the verdicts of prospective jurors . . . ."). So each juror, having formed a predisposition towards either the prosecutor or the defendant, will interpret each additional piece of evidence in that light.
ary rule has been exercised, then not only will they typically consider that evidence, but attempts to instruct them to do otherwise will likely increase their reliance on that evidence, and that evidence could prevent them from giving subsequent exculpatory evidence full credit.

The extent to which jurors do cooperate by ignoring excluded evidence depends on juror idiosyncrasy—for example, if the rationale for exclusion aligns with their own sense of propriety, or if it accords with their sense of the integrity of the investigative process and the reliability of evidence. Bilz found that study participants were significantly more likely to apply the exclusionary rule in some circumstances than in others. They were willing to exclude evidence that should have been inadmissible due to being tainted by police racism, but were much less willing to exclude evidence tainted by innocent police blundering. Jurors appear to care about investigative process, but not about police deterrence, and selectively apply the exclusionary rule in accordance with those preferences.

Given the unpopularity of the exclusionary rule, as discussed below, these results render jurors even more likely to consider any evidence they inferred has been excluded under the exclusionary rule than, for instance, through blindfolding in civil cases. This conclusion is supported by a study by Professors Saul M. Kassin and Samuel R. Sommers that compared jurors’ reactions to two rulings of admissibility of a taped telephone confession, excluded either because the tape was illegally obtained or because the tape was of poor quality. In the latter group, jurors largely followed the instruction to disregard the evidence, convicting at the same rate as a control group that had not seen the evidence at all. But in the former group, they did not. In fact, conviction rates for the group that was meant to ignore the evidence because it was inadmissible by virtue of the exclusionary rule convicted the defendant at the same rate as those who were explicitly allowed to consider the evidence—and at considerably higher rates than those who were instructed to disregard the evidence because of its unreliable quality. This shows not only that jurors selectively consider evidence they are meant to ignore, but also that they show particular reluctance to ignore evidence excluded on the basis of the exclusionary rule. Such a result has important implications for the

127 See Bilz, supra note 121 (manuscript at 2).
128 See id. (manuscript at 16).
129 See id. at 16–17.
130 See Kassin & Sommers, supra note 125, at 1048.
131 See id. at 1049.
132 See id.
exclusionary rule, suggesting that people will use the rule to reflect their own biases.  

Jurors appeared to be particularly prone to failing to cooperate with their duty to ignore excluded evidence when they disagree with the rationale for the exclusion. Professor Kerri L. Pickel found that whereas judicial rationales for the exclusion of hearsay evidence had no significant effect on the probability of conviction, rationales for exclusion actually increased the probability of conviction from 43% to 55% when the exclusions concerned evidence of prior conviction. Pickel hypothesized that this effect arose because jurors have different preconceptions of the inherent fairness of using each type of evidence. A questionnaire of mock jurors confirmed this hypothesis: jurors felt that using hearsay evidence is unfair, but think it is fair to consider prior conviction evidence.

Importantly for our purposes, the use of illegal wiretap evidence was considered significantly more fair than even prior conviction evidence. Pickel was not surprised by the finding, since many studies have shown jurors will not disregard such evidence. This suggests that other applications of the exclusionary rule are likely to have a similar fate. The exclusionary rule is a lot like prior conviction evidence—strong evidence of guilt that is not suggestive of an unreliable foundation, as hearsay evidence is—and thus likely to produce similar results, with jurors considering the evidence that is meant to be excluded.

Furthermore, in choosing when not to consider evidence they personally disapprove of, jurors will ignore evidence they are not meant to ignore. See Monique A. Fleming et al., Procedural and Legal Motivations to Correct for Perceived Judicial Biases, 35 J. EXPERIMENTAL SOC. PSYCHOL. 186, 195 (1999) (noting that sample jurors adjust their perceptions of guilt when evidence that was obtained in violation of due process is ruled admissible).

135 See id. at 420.
136 See id. at 421–22.
137 In addition, jurors considered it fair to use evidence of remedial measures, settlement offers, and liability insurance. See id. at 422.
138 See id.
139 This backfiring effect is also especially problematic for certain kinds of evidence. Particularly memorable evidence, such as emotional testimony, is notably hard for jurors to ignore. Pickel, Karam, and Warner found that if the evidence that jurors heard that was subsequently ruled inadmissible was unusual—using visceral language such as "hacked up" rather than legalistic language such as "assault with a deadly weapon"—then jurors were more likely to ignore the exclusionary ruling and make a finding of guilt. Kerri L. Pickel et al., Jurors' Responses to Unusual Inadmissible Evidence, 36 CRIM. JUST. & BEHAV. 466, 471 (2009); see also Kari Edwards & Tamara S.
So in summary, it is well-established that jurors commonly ignore instructions to exclude, that even where they do follow exclusion instructions, they will only do so in some circumstances to an unknown extent, and, for severe violations, according to their own sense of justice rather than judicial instructions, and that instructions to ignore evidence commonly backfire, leading jurors to rely even more heavily on that evidence than they otherwise would have. Overall, this suggests that exclusion instructions are more likely than not to be ignored, and excluded evidence will shape verdicts.

All of this empirical evidence of juror resistance is well-grounded in the theory of law and economics. The exclusionary rule lacks proportionality: as a dichotomous remedy, if a violation is established, evidence must be excluded, regardless of the severity of the violation, the severity of the crime, or of the harm to society and victims if exclusion leads to the acquittal of a guilty defendant. Because of the lack of proportionality between the severity of any police violation and the seriousness of either the offense the defendant is charged with or the impact of any evidentiary exclusions, law and economics predicts that the exclusionary rule will constitute over-deterrence, and so will be under-enforced.

As Judge Richard Posner has argued, the problem in imposing infinitely large punishments is that it will induce people to refrain from lawful behavior “in order to minimize the probability of being falsely accused” and facing the extreme punishment; this will create a social cost in the form of inefficient behavior of people behaving overly cautiously so as to avoid the punishment.\(^{140}\) Posner argues that the Fourth Amendment exclusionary rule constitutes just such over-deterrence, and that this is the real reason that courts have refused to bar prosecutions due to an illegal arrest.\(^{141}\) This also explains why jurors refuse to cooperate with instructions to either ignore excluded evidence or not to make inferences from the absence of evidence.

Another way of viewing it is that the exclusionary rule constitutes a “hard shove” that makes it highly predictable that it will be under-enforced by jurors. Professor Dan M. Kahan modeled how laws that severely condemn behavior on which there is split public opinion or


\(^{141}\) See id. at 640.
ambivalence will make it more likely that the law will be under-enforced, and can even trigger "a self-reinforcing wave of resistance."\(^{142}\) Support for punishment of a public wrong will depend on the severity of the punishment. Even if a majority of the public disapproves of the behavior being prohibited, if policymakers select a severity level that generates even a small average level of censure for the policy in the community in aggregate, the policy will be under-enforced. Then potential violators will perceive this lack of enforcement as public acceptance and will be encouraged to violate the law further. The result will be group polarization, with a majority of the population accepting the unlawful behavior. Ultimately, the "hard shove" nature of the policy, Kahan argues, will be self-defeating and can even backfire.\(^{143}\)

Evidence of public attitudes to the exclusionary rule suggests it is perceived as such a hard shove. Public attitudes to criminal justice generally tend strongly towards preferences for greater criminal sanctions. In testing attitudes towards the severity of criminal courts in a person’s local area, studies have asked people, "In general, do you think the courts in this area deal too harshly or not harshly enough?" Between 1985 and 2002, a large majority always responded "not harshly enough." The percentage of those responding "too harshly" was always in the single digits. Those responding "about right" ranged from 8% to 18%.\(^{144}\) These figures vary surprisingly little when broken down by demographic characteristics; there is always a solid majority in the "not harshly enough" category, regardless of sex, race, age, education, income, occupation, region, religion or politics of the respondent.\(^{145}\)

\(^{142}\) Dan M. Kahan, Gentle Nudges vs. Hard Shoves: Solving the Sticky Norms Problem, 67 U. CHI. L. REV. 607, 608 (2000); see also Charles E. Lindblom, The Science of "Muddling Through," 19 PUB. ADMIN. REV. 79, 80–81 (1959) (arguing that for practical reasons most public policy will be an evolutionary and incremental process, not a revolutionary one).

\(^{143}\) Kahan, supra note 142, at 617–18.

\(^{144}\) U.S. DEP’T OF JUSTICE, SOURCEBOOK OF CRIMINAL JUSTICE STATISTICS 140–41, tbl.2.47 (Ann L. Pastore et al. eds.), available at http://www.albany.edu/sourcebook/toc.html (citing NAT'L OP. RES. CTR., GENERAL SOCIAL SURVEYS 1972–2002 (reporting years 1985 to 2002)). Similarly large majorities—between 63% and 67%—responded that courts do not deal harshly enough with criminals, in biennial surveys between 2002 and 2008. NAT'L DATA PROGRAM FOR THE SOC. SCI., GENERAL SOCIAL SURVEY 1972–2008. This is a decline from the 1980s and 1990s, when those numbers never dropped below 70% in any category.

\(^{145}\) U.S. DEP’T OF JUSTICE, supra note 144, at 140–41, tbl.2.97. The one exception is 18 to 20-year-olds in 2002, with 48% responding "not harshly enough."
As for the exclusionary rule itself, there is "an instinctive and deep-seated hostility to the exclusionary rule" and "the perception that the rule sets the guilty free undermines public confidence in our system of justice."\textsuperscript{146} The overwhelming majority of Americans think more needs to be done, and that it is very important that it be done, to make sure that punishments fit the crimes.\textsuperscript{147} This goal is the top priority of the public's reform objectives.\textsuperscript{148} The exclusionary rule is seen as a means by which criminals "get off on technicalities," and is viewed as contrary to this populist goal. The effect is that "as an empirical matter, the rule probably does more damage to public respect for the courts than virtually any other single judicial mechanism, because it makes courts look oblivious to violations of the criminal law and involves prosecutors, defense attorneys and judges in charade trials in which they all know the defendant is guilty."\textsuperscript{149}

This attitude is further reflected in public support for police, which contrasts with the dim view of judges. Whereas 58\% of people believe police and law enforcement are performing an excellent or good job, in contrast only 37\% feel the same way about judges.\textsuperscript{150} The single most popular reason for this negative assessment of judges given is flaws in the criminal justice system, particularly "loopholes that allow criminals to 'get off,'" which account for 18\% of those expressing dissatisfaction with judges.\textsuperscript{151} Criminal punishment is perceived as being overly lenient, and a strong cause of this excess lenience is lack of fit between crime and punishment,\textsuperscript{152} in particular

\textsuperscript{146} Perrin et al., \textit{supra} note 18, at 672.
\textsuperscript{148} See id. 29\% specified this as the most important reform goal when told to choose only one option from a list of five potential reform objectives.
\textsuperscript{149} Christopher Slobogin, \textit{Why Liberals Should Chuck the Exclusionary Rule}, 1999 U. Ill. L. Rev. 363, 436-37; see also Amar, \textit{supra} note 1, at 799 ("In the popular mind, the [Fourth] Amendment has lost its luster and become associated with grinning criminals getting off on crummy technicalities. When rapists are freed, the people are less secure in their houses and persons—and they lose respect for the Fourth Amendment." (footnote omitted)); Lawrence Crocker, \textit{Can the Exclusionary Rule Be Saved?}, 84 J. Crim. L. & Criminology 310, 311 (1993) (arguing that the exclusionary rule "is attacked as one of the chief technical loopholes through which walk the guilty on their way out of the courthouse to continue their depredations," which led to its negative position in public opinion, long before that view was reflected by the Court).
\textsuperscript{150} Nat'l Ctr. for State Courts, \textit{supra} note 147, at 16.
\textsuperscript{151} Id. at 17.
\textsuperscript{152} The next most common reason for the negative assessment of judges is their perceived excessive lenience in sentencing—17\% of those critical of judges give this reason, along with 6\% who complain that sentencing is inconsistent or lacks proportionality. \textit{Id}.\textsuperscript{149}
allowing criminals to avoid appropriate sanction due to technical pro-
defendant rules like the exclusionary rule. These attitudes exacerbate
juror resistance to ignoring excluded evidence.

C. Juror Error

Like Sherlock Holmes, jurors will make inferences from the “dog
that did not bark;” however, unlike the fictional master detective,
jurors will often make the wrong inferences.\textsuperscript{153} As discussed, there
will be many triggers that suggest that the exclusionary rule has been
exercised, but many of these triggers will in fact be false. Jurors’ incli-
nations to consider inferences stemming from the exclusionary rule
can result in both inaccuracy and bias;\textsuperscript{154} this section considers the
former, the next section the latter.

When the exclusionary rule is exercised, the result may be that
obvious holes are created in the prosecution’s case. The victim was
shot and there was evidence of gun residue on the defendant’s hands,
but no gun was ever admitted into evidence—one possible inference
from that information is that the gun was seized in contravention of
the Fourth Amendment and excluded. At other times, however, those
holes in the prosecution’s case may arise because the prosecutor does
not in fact have all of the information about the crime—that is, the
case may be incomplete even without the operation of the exclusion-
ary rule. The police may simply have never found the gun used to
shoot the victim, rather than having found the gun in the defendant’s
possession and it being subsequently excluded. Cues that exclusion
has operated do not invariably stem from actual exercises of exclu-
sion. Gaps in the evidence may manifest, for instance, because the
prosecution witness has proved to be unreliable. Since prosecutors
are subject to significant resource constraints, they may also push
ahead with a prosecution in the hopes that all of the dots will connect
by the end of the trial, or else that the jury will be willing to overlook
some deficiencies in the case. The problem is that the existence of
the exclusionary rule may create an impression that evidence has
been excluded even where the rule has not in fact operated. This
misinformation can be extremely harmful.\textsuperscript{155}

\textsuperscript{153} See generally Jeffrey J. Rachlinski, \textit{Heuristics and Biases in the Courts: Ignorance or Adaptation?}, 79 Or. L. Rev. 61 (2000) (discussing the limits of jurors’ ability to fulfill their tasks).

\textsuperscript{154} See infra Part II.E for a discussion of the formal effects.

\textsuperscript{155} The limits on the ability of a defense lawyer to exploit these gaps in the prose-
cution’s case to make it clear that evidence was not excluded against this particular
defendant is discussed infra in Part III.B.
The foregoing social psychology evidence showed that jurors will update their expectations of guilt, and adjust their probable verdicts, based on excluded and absent evidence; but jurors will not always be accurate when updating their assessments of guilt on the basis of inferences of excluded information. Typically, jurors know about the existence of the exclusionary rule but cannot know with any certainty whether it has operated in a given case, versus when natural holes have arisen in the prosecutor’s case. As such, they will mitigate the effect of the exclusionary rule based on their probabilistic expectation of whether the rule has operated in any case, but this impression may not be perfectly accurate. Jurors will make their expectation of guilt based on the information that they have been presented with, and vary that somewhat by their expectation of whether additional evidence exists but has been excluded by the rule. Because the exclusionary rule only works in favor of the defense, this updating of jurors’ expectations of guilt, based on their expectation of the exclusionary rule having operated, will only work in one direction: in favor of the prosecution. As such, jurors will update their beliefs in a way that effectively discounts the burden of proof that the prosecution ordinarily has to bear.

For instance, in a case where jurors hear that evidence implicating the defendant was found in his office, but no mention is ever made of a search of his home, jurors may estimate that the odds of the exclusionary rule having operated to exclude evidence found in the home are high. Without other evidence, this inference may not take the jurors very far, but if there is considerable other evidence—gunshot residue, bloodied clothing, etc.—but the gun was never found, jurors might feel confident in dismissing the doubt that missing piece of evidence otherwise might create. This will only occur if jurors are confident that they can tell when evidence has been excluded, but there is considerable evidence that people are generally overconfident of their ability to make such assessments.156

156 This is not simply a result of the well-known overconfidence bias, but also of a number of other heuristics, including insensitivity to sample size and misperceptions of chance, which leads people to overestimate probabilistic occurrences; the illusion of validity, which leads to overconfidence in the degree of representativeness of the sample and under-account of factors that limit accuracy; and anchoring and assessments of subjective probability, which leads to overly narrow confidence intervals. See generally Amos Tversky & Daniel Kahneman, Judgment Under Uncertainty: Heuristics and Biases, 185 Sci. 1124, 1124 (1974) (showing that the limited heuristics individuals normally rely on “are quite useful, but sometimes they lead to severe and systematic errors”).
If jurors do infer that the exclusionary rule operated to some extent, and they update their expectations of the defendant's guilt accordingly, that inference will translate into giving the prosecutor a discount in her burden of proof. Say jurors estimate that, given the other evidence found and the lack of a search producing the gun, the odds that the gun was found but excluded are fifty-fifty, then they would give the defendant only half of the benefit of the doubt over whether he had the gun.

It is standard in economic modeling to assume that when a person or group is making a determination where they lack relevant information—here the jury has to make a determination of guilt but lacks information as to whether the evidence was excluded—the decision-maker(s) will assign the expected average value for the unknown quantity. So if the jurors do not feel confident in their ability to estimate how likely it is that the exclusionary rule operated, based on the other evidence they have seen, they instead will use as a proxy their prior beliefs as to how likely the exclusionary rule is to operate in any case. That is, they will apply the average expected discount to the prosecutor's burden of proof.

But that does not mean the exclusionary rule is simply negated by juror mitigation—it does not return the criminal justice system to neutral, as if the rule had not operated. Rather it perverts the system, for two reasons. First, jurors' estimates of the likelihood of exclusionary rule operation may be quite inaccurate. If jurors base their expectations of the criminal justice process on television shows and other popular culture, as some evidence shows they do, they could massively overestimate or underestimate how often and how stringently the exclusionary rule applies. Such miscalculations will only magnify the inaccuracy created by the exclusionary rule. Consequently, this argument is not dependent on an assumption of high levels of juror knowledge or sophistication.

Second, even if juror estimates are right, the outcome will be wrong. Even assuming that an estimate is perfectly accurate, and that jurors update their beliefs in a rational and accurate manner, the jurors' updated beliefs will nonetheless be inaccurate. For example, if jurors estimate that the odds of the exclusionary rule having been

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157 These "signaling models" describe a scenario where one party who lacks pertinent information is attempting to estimate the value of goods based on inferences made from partially informative, or even deceptive, signals that the party with the information provides—for instance, a consumer attempting to assess the relative merits of an advertised product. See Phillip Nelson, Advertising as Information, 82 J. Pol. Econ. 729 (1974).

158 See supra note 102.
exercised are fifty-fifty in the factual scenarios where the gun was excluded, they will be under-estimating the operation of the rule by 50%, and where it was not excluded they will be overestimating by 50%. If the defendant did in fact have the gun and it was excluded from admission as evidence, the jurors will have only mitigated half of the benefit of the exclusionary rule to the defendant—they will still give the defendant half of the benefit of the doubt. And in the case where the defendant did not have the gun and it simply was never found, the defendant will not receive the benefit of the doubt that he otherwise would have—he will effectively be penalized for the prosecution’s failure to find the murder weapon. The exercise of the exclusionary rule is an either/or outcome, but the jurors’ best estimate of the probability of the rule having been exercised is necessarily a fraction. So by necessity, the jury will have overestimated the effect of the exclusionary rule half of the time, and underestimated it in the other half.

The result is that the exclusionary rule increases the inaccuracy of the criminal justice system. The next section shows that it also introduces a bias against innocent defendants being found acquitted.

D. Perverse Screening

Juror resistance means that jurors will be filling in gaps in prosecutor’s cases with potentially inadmissible evidence; juror error means this process of gap filling may be correct or incorrect. This section shows that the combination of juror resistance and juror error results in a systematic bias against those defendants most likely to be actually innocent.

Even when the process of gap filling is accurate, jurors are still giving prosecutors the benefit of evidence they were not allowed to use. In effect, this is a means of lowering the prosecution’s burden of proof. The exclusionary rule only operates in the defendant’s favor; so when jurors have expectations that the exclusionary rule has been applied, and they consider evidence so as to negate that exclusion, this effectively provides a supplement to the prosecution, discounting the burden of proof. Ironically, the more stringent the exclusionary rule is understood to be, the greater the discount to the prosecutor’s burden.159 This is because the more that the exclusionary rule operates like a grim trigger that applies to any minor technical breach by the police, the more likely jurors are to believe it will have operated in any given case, and the more likely they are to discount the prosecu-

159 See infra Part II.E for a formal proof of the discount.
tion's burden of proof. This is a classic example of the ineffectiveness of a hard shove: the unpopularity of the exclusionary rule leads to an unwillingness to apply it, and its ultimate impotence.160

On average, these overestimates and underestimates could cancel out. If jurors' estimates of overall exclusionary rule application are accurate, then the overall effect of the exclusionary rule in terms of the number of convictions will be zero. But this does not mean that the effect of the exclusionary rule itself is neutral—far from it. As we have seen, one effect of the rule is to increase the inaccuracy of the criminal justice system, because it decreases the accuracy of jurors' perceptions of the evidence in a trial. Although defendants for whom the exclusionary rule has been exercised will benefit from it, they will do so only partially; it will not be as if the evidence had never been discovered. Instead, while their probability of conviction will be decreased by the exclusion of evidence, that decrease will be partially offset by the jury's probabilistic assessment of the benefits criminal defendants receive because of the operation of the exclusionary rule. Unless the expectation of exercise of the rule is zero—that is, where jurors have no knowledge of the exclusionary rule or refuse to update their expectations on the basis of that knowledge, contrary to the social psychology evidence161—this outcome will always be a higher probability of conviction for defendants—defendants will not be returned to their "neutral" position, but for the violations.162 One implication of this outcome is that it means that the corrective justice claim that the exclusionary rule returns defendants to the neutral position he or she would have been in but for the unlawful state action163 is fundamentally flawed.

The implications of juror updating are far more troubling when we consider the effect on defendants for whom the exclusionary rule has not in fact been exercised. They will be penalized by the very exis-

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160 I show below that a similar unwillingness by judges to fully apply the exclusionary rule further exacerbates its futility. See infra Part III.
161 See supra Part II.B.
162 For a mathematical proof, see infra Part II.E.
163 Corrective justice is the view that the law's role is to restore the victim of a wrong to the position occupied before the violation. See A.V. Dicey, INTRODUCTION TO THE STUDY OF THE LAW OF THE CONSTITUTION 200–01 (4th ed. 1893) (noting that the recognition that every injured right must have a remedy has done "more to maintain the authority of the law" than almost any other feature of the legal system). In the Fourth Amendment context, exclusion of improperly obtained evidence is the "backwards looking compensatory" remedy that allows for easy enforcement of the right violated by the state. Kent Roach, The Challenges of Crafting Remedies for Violations of Socio-Economic Rights, in SOCIAL RIGHTS JURISPRUDENCE 46, 46–48 (Malcolm Landford ed., 2008).
tence of the rule. Instead of being given the benefit of the doubt, that doubt will be reduced by the same ratio as above, but with a founda-
tionally different effect. There will be no direct benefit from exclu-
sion, since nothing is excluded, and at the same time jurors will
nonetheless reduce the prosecutor's burden, out of the same proba-
bilistic assessment that the exclusionary rule has been exercised.
Whereas without the exclusionary rule these defendants would have
the full benefit of the doubt, with the rule jurors will wrongly con-
clude that these defendants probably have benefited from exclusion,
and thus penalize them for the wrongs that the police have done to
others.

Worse yet, the fact that the absence of evidence can be seen as a
trigger means that jurors could actually take a weak prosecution as
implying the operation of the exclusionary rule. Then, the very weak-
ness of the prosecution's case would increase the discount of the pros-
ecutor's burden.

It is possible that the distribution between the two groups of
defendants—those for whom the exclusionary rule has been exercised
and those for whom it has not—could be random, with some defend-
ants gaining a benefit from the exclusionary rule (a positive benefit
even when discounted) at the cost of other defendants. But the more
likely outcome is that the police will more often violate the Fourth
Amendment rights of those they believe are the most likely to be
guilty.164 The rule necessarily operates where there is evidence to be
excluded—and only applies to inculpatory evidence. That the
probability of guilt will increase with each additional piece of inculpa-
tory evidence is axiomatic to the criminal justice system. Since, as dis-
cussed, Fourth Amendment exclusions do not raise reliability
concerns, unlike evidence excluded under the Fifth Amendment,165
then logic dictates that any exclusion of evidence under the Fourth
Amendment is more likely to benefit guilty rather than innocent
defendants. In fact, the Supreme Court has implicitly recognized this
relationship in its repeated acknowledgement that the cost of the
exclusionary rule is to let guilty criminals go free.166

164 Note that this is not the same as saying that most illegal searches will be of
guilty persons—quite the contrary, since, as discussed in Part I, the exclusionary rule
does little to discourage the police from harassing innocent citizens. Rather, the
argument here is that searches that result in evidentiary exclusions in the courtroom neces-
sarily will have been successful in terms of finding evidence of guilt, and thus are most
likely be associated with actually guilty defendants.
165 See supra note 21.
166 See, e.g., Mapp v. Ohio, 367 U.S. 643, 659 (1961) ("The criminal goes free, if he
must . . . ").
The argument that defendants who benefit from the exclusionary rule are most likely to be guilty is not mere conjecture; there are two forms of empirical evidence that are highly informative on this question. First, there is evidence that it is overwhelmingly reoffenders who successfully exercise the exclusionary rule at the trial stage. Second, there is evidence that those who do successfully exercise the exclusionary rule subsequently reoffend. When these two findings are combined with evidence of the relationship between prior offenses and conviction rates, this data confirms that actually guilty defendants are most likely to benefit from the exclusionary rule.

For example, in terms of who exercises the exclusionary rule, Professor James Spiotto’s study found that 78% of all motions to suppress were made by those defendants who had a prior criminal record. Whereas defendants who had no criminal record constituted 29% of the defendant pool, they constituted only 12% of those making motions to suppress. In addition, defendants with criminal records were also more likely to succeed with their suppression motions. These results show both that reoffenders exercise the exclusionary rule at a disproportionate rate and that reoffenders are disproportionately successful in exercising the rule. A study by the National Institute of Justice provides further evidence of the correlation between use of the exclusionary rule and guilt: “About half of those arrestees who were freed because of the exclusionary rule were re-arrested during the follow-up period (twenty-four to twenty-eight months after release).”

In summary, defendants who exercise the exclusionary rule are very commonly subsequently rearrested; they are also overwhelmingly those with prior records, and having a prior record is the best predictor of a guilty verdict, whether or not the jury knows of those prior crimes. As such, there is strong empirical evidence that those who benefit from the exclusionary rule are those most likely to be actually

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168 See Nat’l Inst. of Justice, supra note 42, at 16.
169 Spiotto, supra note 167, at 255–56.
170 Nat’l Inst. of Justice, supra note 42, at 16.
171 See Ronald J. Allen & Larry Laudan, The Devastating Impact of Prior Crimes Evidence—And Other Myths of the Criminal Justice Process (Univ. of Tex. Pub. Law & Legal Theory Research Paper Series, Paper No. 183, 2010) (showing the best predictor of conviction is prior convictions, even when such prior convictions are not known to the jury).
guilty. This means that the exclusionary rule is actually creating adverse selection. Adverse selection arises when incentives are structured such that good actors are discouraged from, or even punished for, participation in a desired activity and bad actors are encouraged and rewarded for participating, when the participation of bad actors is damaging. Here, guilty defendants are being encouraged to make use of the exclusionary rule, while innocent defendants are being denied their full benefit of the doubt.

The usual solution to adverse selection problems is to create screening. Screening is a mechanism of structuring incentives so as to allow a decision-maker to select out bad actors in such an adverse selection scenario, even when the decision-maker has less information than the other actors about who is good and who is bad. So screening would encourage innocent defendants to exercise their full rights, leading to separation between innocent and guilty defendants, instead of encouraging guilty defendants to exercise their full rights, which often leads to pooling between innocent and guilty defendants. However, what the exclusionary rule does is create perverse screening, whereby the opposite result is achieved: guilty defendants are encouraged to exercise their full exclusionary rule rights, leading to pooling between innocent and guilty defendants, and innocent defendants are effectively hampered in exercising their full rights.

This perverse screening is the result that the logic of the exclusionary rule rationale predicts, but it is an outcome that ultimately dooms itself, as it means that those who benefit from the exclusionary rule are primarily actually guilty, and that they gain that benefit at the cost of the actually innocent. The actually innocent have their entitle-

172 Of course this analysis treats conviction as a good proxy for guilt, but if that correlation is not highly reliable then there are far more serious problems with the criminal justice system than any concern the exclusionary rule alone could raise.

173 The classic example is insurance: bad drivers have greater incentives to become insured and good drivers have far less incentive; if adverse selection is strong enough, and good drivers drop out of the market, only bad drivers will be insured and the entire market can unravel, since it is not cost efficient to insure only bad drivers. See Michael Spence, Job Market Signaling, 87 Q.J. Econ. 355 (1973). This has proved to be particularly problematic in the medical insurance market, with elimination of markets for some generous insurance coverage, due to self-selection of healthy people out of the higher cost generous coverage plan, thus making the generous plan unsustainable. See David M. Cutler & Sarah J. Reber, Paying for Health Insurance: The Trade-Off Between Competition and Adverse Selection, 113 Q. J. Econ. 433 (1998).

ment to the benefit of the doubt considerably diminished by the exercise of the exclusionary rule, without any correlative benefit.

This section has provided the intuitive analysis of how this perversion occurs, along with some very simple examples; the following section provides a formal model that systematically proves that effect.

E. A Formal Economic Model of the Exclusionary Rule at the Trial Stage

In the policing section, I modeled a simple police investigation, such as a drug bust, in which evidence seized would constitute the sole evidence against the potential defendant. In this section, in order to examine how the exclusionary rule plays out in trials, I model a more complex police investigation, such as a murder, in which the prosecution will proceed even without the controversial evidence. However, it is important to note that simple cases that are dependent upon unlawful evidence also play a part in the perverse screening effect of the exclusionary rule at the trial stage. Most exclusionary rule applications will, if successful, result in prosecutors simply dropping cases against defendants—this is particularly true in drug cases where often the drugs seized in the search are the primary evidence against the defendant. Obviously, if the case is dropped then there will be no benefit of the doubt for the defendant to lose—the case will never get beyond pre-trial; however, in the remaining cases, prosecutorial drops could actually worsen the perverse screening effect. As we saw above, the average juror considers the criminal justice system to be far too lax on criminals—weekly viewings of shows such as Law and Order in which thwarted prosecutors triumph despite numerous exclusions being exercised over vital evidence may increase jurors' expectations of how likely they are to be facing a defendant who has benefited from the exclusionary rule. If in fact many of those who have benefited from the rule have been selected out of the pool due to a prosecutorial drop, then jurors will overestimate the effect of the exclusionary rule for the remainder, thus further increasing their probability of convicting.

We can think of the range of excludable and admissible evidence as a continuum of governmental intervention against the defendant, some of which may constitute constitutional transgressions. At point 0, there is no governmental action against the defendant, and so usually no evidence. At some point along the continuum, an exclusionary rule \( e^R \) can be set: below this point \( e^R \), evidence will be admissible in court, and above this point, evidence will be excluded.

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175 See supra note 102.
The lower (further to the left) $e^R$ is, the more evidence it excludes, and the more stringent the rule. It is helpful to think of a maximum point, $\hat{e}$, the most damaging police intrusion, although in reality that limit may not exist—since as in *Chavez v. Martinez*, even police torture does not of itself necessarily violate the Constitution. Figure 2 illustrates this concept, with non-exhaustive examples of legal rules and specific factual scenarios provided below.

**Figure 2: Level of Admissibility of Evidence of Guilt of Defendant**

<table>
<thead>
<tr>
<th>Legal Rule</th>
<th>Factual Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirandized Interview</td>
<td>Alibi contradiction</td>
</tr>
<tr>
<td>Search with Warrant</td>
<td>Bullets in trunk of car</td>
</tr>
<tr>
<td>Attenuated Fruit</td>
<td>Bloodied gloves</td>
</tr>
<tr>
<td>Non-Mirandized Interview</td>
<td>Coerced confession</td>
</tr>
<tr>
<td>Warrantless Search</td>
<td>Gun found in house</td>
</tr>
</tbody>
</table>

Figure 2 describes a hypothetical murder case, which uses both Fourth and Fifth Amendment scenarios for illustration. Here, interviews with suspects who have been given their *Miranda* warnings, searches undertaken subject to a warrant, and fruit attenuated to that warranted search are all to the left of $e^R$, and so admissible. So, for example, an admission made after a *Miranda* warning can be used to contradict a defendant’s alibi; bullets in the trunk of the defendant’s car found subject to the search are admissible, as are bloodied gloves found at a secondary scene, of which the police learned through finding the bullets. However, a coerced confession will be excluded, as will the smoking gun found in the defendant’s home if the search was undertaken without a warrant. The nature of the scale may vary; for example, an interview involving actual physical coercion may be closer to the extreme right of potential governmental intrusion. Notice that

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177 Justice Stevens considered the police interrogation of the suspect Martinez—while he was awaiting emergency medical treatment and believed himself to be dying—to have been torture. *Id.* at 783 (Stevens, J., concurring in part and dissenting in part) ("[T]he interrogation of respondent was the functional equivalent of an attempt to obtain an involuntary confession from a prisoner by torturous methods."). However, Justice Thomas concluded that "the mere use of compulsive questioning, without more, [does not violate] the Constitution." *Id.* at 767 (Thomas, J., plurality opinion).
all of the evidence described is inculpatory, since only evidence produced by the state is subject to the exclusionary rule.

Most of the existing literature on the exclusionary rule is dedicated either to debate over whether the exclusionary rule should exist,178 or if so, how stringent it should be—for example whether a good faith exception should exist,179 or whether it should apply to knock-and-announce violations.180 This debate is captured in Figure 2: the further to the right is $\epsilon_R$, the less stringent is the exclusionary rule, up to and including $\tilde{e}$—an extreme that would endorse all government intrusion and effectively abolish the exclusionary rule.

Now we can model how a potential juror will assess the evidence in a given case. Our concern at the trial stage is how both evidence admitted and the possibility of evidence excluded will shape the jurors' propensity to convict. We want to know the probability of conviction, given the evidence. We can then compare the situation in which all the evidence (that is up to $e$) is admitted, to the situation in which there is an exclusionary rule, under which some evidence may be excluded.

Since verdicts are dichotomous in the common law system,181 let the probability of conviction $p(C) \in [0,1]$—a probabilistic range including $0 = \text{Acquittal (A)}$ and $1 = \text{Conviction (C)}$. $p(C)$ will be determined by the evidence, $e$, the details of which are as follows.

The naive view of the exclusionary rule is:

$$p(C) = e_a$$

That is, jurors will only consider the evidence admitted, $e_a$. However, the social psychology literature shows that juries are mission-oriented, not legal rule-oriented, and so will consider all evidence


179 Compare United States v. Leon, 468 U.S. 897, 920 (1984) (citing Stone v. Powell, 428 U.S. 465, 539–40 (1976) (White, J., dissenting)) (arguing there is no deterrent value in excluding evidence when police have acted in good faith upon a magistrate’s determination), with id. at 956–57 (Brennan, J., dissenting) (arguing that a good faith exception will send a message to magistrates that their decisions will not be reviewed, and encourage police to provide the bare minimum of information to those magistrates).

180 Compare Hudson v. Michigan, 547 U.S. 586, 599 (2006) (justifying an exclusionary rule exception for knock-and-announce violations), with Albert W. Alschuler, The Exclusionary Rule and Causation: Hudson v. Michigan and Its Ancestors, 93 Iowa L. Rev. 1741, 1741 (2008) (“The Court's decision is likely to withdraw the remedy in the cases in which it is most likely to work and to leave the police with little incentive to conduct searches properly.”).

181 In contrast to trichotomous systems where verdicts of “not proven” can also be handed down.
available to them, even evidence that requires them to make inferences. As such, we expect instead that $p(C)$ will be determined by the admitted evidence, $e_a$, as well as by some consideration of the excluded evidence, $e_e$. However, since jurors will typically not know $e_e$, they will only have some estimation of what has been excluded. Thus in addition to $e_a$, they will consider $E(e_e)$—their expectation of the excluded evidence.

Then the probability of guilt will be:

$$p(C) = e_a + E(e_e)$$

Where $e_a = e^g - e^i$

And $E(e_e) = E(e_R^e)$

(1) So $p(C) = e_a + E(e_e) \geq e_a$

That is, the probability of conviction, $p(C)$, is a function of the admissible evidence presented ($e_a$) plus the jurors’ expectations of any excluded evidence $E(e_e)$, for a given exclusion level, $e_R$. Whereas admitted evidence is comprised of evidence of innocence, $e^i$, and evidence of guilt, $e^g$, excluded evidence consists only of evidence of guilt—and thus consideration of $e_e$ will either have no effect or lead to an increase in the probability of conviction—i.e., $e_e \geq 0$.

The following analysis makes clear that $e_e$ will have a positive, and not a neutral, effect on the probability of conviction—i.e., $e_e > 0$.

Since jurors do not have actual knowledge of the operation of the exclusionary rule, their expectation of $e_e$ will be:

$$E(e_e) = \int_{e_R}^{\bar{e}} e_e \, de$$

This means that $E(e_e)$ will be the jurors’ expectation of the average level of excluded evidence: the average evidence expected to occur in the range $e_R$ to $\bar{e}$, given the exclusionary rule level, $e_R$.

As mentioned, the naive view of the exclusionary rule is that $p(C) = e_a$, but this will only occur if $\int_{e_R}^{\bar{e}} e \, de = 0$. But:

(3) if $e_R \neq \bar{e}$, then $\int_{e_R}^{\bar{e}} e \, de > 0$

As long as there is an exclusionary rule that is capable of excluding some evidence in some cases, however extreme, then $e_R \neq \bar{e}$, and so the average expectation will be positive. As such:

$E(e_e) > 0$

And:

(4) $p(C) = e_a + \int_{e_R}^{\bar{e}} e_e \, de > e_a$
Equation (1) shows that $p(C) = e_a + E(e_e) \geq e_a$—the probability that jurors will convict is equal to or greater than it is assumed to be under the naive view of the exclusionary rule. Equation (3) shows that with a non-trivial exclusionary rule, jurors’ expectation of the excluded evidence will be positive, not zero; as such, equation (4) shows that the probability of conviction equals the impact of the admitted evidence plus the average expected effect of excluded evidence, which is greater than the probability of conviction looking just at the admitted evidence.

The first important implication of these results, then, is that the excluded evidence will have a positive effect on the probability of conviction. This rebuts the naive view of the exclusionary rule, and shows that jurors will discount the burden of the prosecution’s proof in response to the exclusionary rule.

The second important result is drawn from equation (2). This shows that the expected value of the excluded evidence equals the expected average of all excluded evidence; this will be a function of the range $e_e$ that lies between $e^R$ and $\bar{e}$. This means that as $\bar{e} - e^R$ increases, $e_e$ will increase monotonically; i.e., the more stringent the exclusionary rule, the more jurors will discount the prosecutor’s burden of proof.

The third important result drawn from this model demonstrated by equation (4) is that if the operation of the exclusionary rule is kept secret from jurors, jurors will increase the probability of conviction in any case by their expectation of the average operation of the exclusionary rule in the whole distribution of cases. This means that:

\begin{align*}
(5) \quad p(C^j|ER) &= e_a^j + \int_{e_e} e_e de \\
(6) \quad p(C^k|ER) &= e_a^k + \int_{e_e} e_e de
\end{align*}

That is, the probability of conviction of defendant $j$, against whom the exclusionary rule has been exercised, will be a product of the evidence admissible against defendant $j$ plus the expected average of $e_e$ in the overall distribution. And the probability of conviction of defendant $k$, against whom the exclusionary rule has not been exercised, will be a product of the evidence admissible against defendant $k$ plus the expected average of $e_e$ in the overall distribution. In both cases, $e_a$ is individualized to each defendant—a product of the evi-

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182 As discussed in relation to Figure 2, supra, setting $e^R = \bar{e}$ is the same as abolishing the exclusionary rule, and thus the requirement that $e^R \neq \bar{e}$ is trivial.
dence against him or her—but \( e_i \) is not individualized; it is simply an average of the whole distribution of defendants.

This third result has two important implications. The first and simplest is that the exclusionary rule does not operate as corrective justice advocates suggest, returning defendants to their neutral position but for the governmental transgression. Instead, it returns them to the average position of all defendants, some of whom will have their rights transgressed, and others who will not. As such, the exclusionary rule creates arbitrariness in the application of justice—defendants are subject to judgment based on jurors' expectations of the behavior of all criminal defendants and police, not of their own individualized culpabilities.

The second implication of this third result is even more troubling: the effect of the rule creates more than simple arbitrariness in the application of justice; it creates bias against those defendants who are most likely to be actually innocent.

To see why, consider two classes of defendants: as before, \( j \) defendants have had the exclusionary rule exercised in their favor, and \( k \) defendants have not. For the former group, the actual evidence, in each case \( j_1, j_2, \ldots j_n \) is:

\[
e_{j_1} + e_{j_2} + \ldots + e_{j_n}
\]

But for the latter group, the actual evidence in each case is \( k_1, k_2, \ldots k_m \) is only:

\[
e_{k_1} + e_{k_2} + \ldots + e_{k_m}
\]

For each \( j \) defendant, the average excluded evidence \( e_e \) is:

\[
E[e_e] = \frac{1}{n} \sum_{i=1}^{n} e_{i_e}
\]

This equation equals the sum of the excluded evidence in each case, divided over \( n \), the number of \( j \) defendants. But the discount to the prosecutors' burden of proof is applied to all defendants, \( j \) and \( k \). As such, as long as \( k \) is not a null set—that is, as long as there are some defendants against whom the exclusionary rule is not exercised—then:

\[
\frac{1}{n} \sum_{i=1}^{n} e_{i_e} > \int e, de
\]

Equation (10) shows that the average benefit of the exclusionary rule for defendants for whom the exclusionary rule is actually applied is greater than the average expected excluded evidence, by which that benefit will be offset by the jury. As such, these defendants will still
benefit overall from the existence of the exclusionary rule. For the average \( j \) defendant, the probability of conviction will be lower than it would have been without the exclusionary rule, even though the rule's effect will be somewhat lessened by juror updating.

This is an important result because it shows that where exercised, although the exclusionary rule does not fully restore defendants to their position but for the violation, it does benefit those defendants for whom the rule is exercised. However, the result in equation (10) only occurs because the probability of conviction for each \( k \) defendant is increased beyond what it is in equation (8). For defendants who do not benefit from the exclusionary rule, the probability of conviction is increased, on average, by the same amount that it is decreased for those who do benefit from the rule. \( j \) defendants benefit by the same amount that \( k \) defendants are penalized by: the difference \( e_j^i > \int e_e de \).

As such, the exclusionary rule operates systematically to the detriment of every defendant against whom the exclusionary rule is not exercised. So defendants who receive the benefit of the exclusionary rule do so at the cost of defendants who have not had the exclusionary rule exercised in their case.

Similar logic shows that the exclusionary rule also could disadvantage any given \( j \) defendant who received only a small benefit from the exclusionary rule. For each \( j \) defendant, the actual evidence is \( e_j^i + e_e \), but we know from equation (4) that \( p(C) = e_j^i + \int e_e de \). In any case, \( p(C) \) could be greater than or less than the actual evidence—which would have decided each defendant's case, but for the exclusionary rule. Thus any \( j \) defendant receiving less than the average exclusion will in fact be harmed by the rule's existence. The greater the variation within group \( j \) of the extent of the benefit of the exclusionary rule, the greater will be the likelihood that some defendants even within this group will be harmed by the rule. Thus the automatic operation of the same remedy of exclusion being applied for violations large and small, and for minor or very serious crimes, renders the effect of the rule particularly unfair. Those who only receive a small benefit, i.e., those facing more minor charges, will be punished because of the large effect of the rule in some dramatic cases.\(^{183}\)

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\(^{183}\) Building on this analysis, Dharmapala, Garoupa, and McAdams, supra note 20, argue that the benefit of the doubt of defendants will not always be reduced if jurors not only anticipate the excluded evidence, but also consider and react to the possibility that prosecutors may be opportunistic, seeking to manipulate this juror anticipation in order to maximize the fraction of suspects convicted. Then, whether the
As we saw in the previous section, defendants for whom the exclusionary rule has been exercised are most likely to be actually guilty, and defendants for whom the exclusionary rule has not been exercised are most likely to be actually innocent. Thus the model shows: first, there is arbitrariness in the operation of the exclusionary rule, such that it benefits some defendants and hurts others; second, there is systematic bias in the operation of the exclusionary rule, such that it advantages some defendants at the cost of others; and third, that the exclusionary rule benefits those defendants most likely to be actually guilty, to the detriment of those defendants most likely to be actually innocent.

This undermines the claim that the costs of the exclusionary rule are "the costs imposed by the Fourth Amendment itself... [since] the exclusionary rule excludes evidence that would never have been acquired if the police had obeyed the Fourth Amendment in the first place." In fact, the exclusionary rule does not effectuate such a neutral undoing of a constitutional violation; rather, it just shifts the burden for that violation from one defendant to another. That shift occurs by increasing the burden at the judicial stage onto the actually innocent, thus exacerbating the effect that the rule has at the policing stage of failing to protect the innocent.

Thus we see that even well-intentioned rules can have counterintuitive results, undermining the goals they seek to promote, when assumptions are made that are not carefully modeled. The prosecutor will benefit in the effective standard of proof she must overcome will vary, as here, with the probability distribution of suspects, but also with whether prosecutors prefer to convict as many defendants as possible, regardless of guilt. However, two important caveats apply to this counterclaim. First, Dharmapala, Garoupa, and McAdams only consider cases where excluded evidence is relatively small, so the exclusion is not determinative—as such, its qualifications do not apply to the model presented in Part I of this Article. Second, Dharmapala, Garoupa, and McAdams's qualification on the findings of this Part’s model only follows when the jury genuinely cares only about convicting the guilty, but the prosecutor prefers to convict as many defendants as possible, without regard to their innocence or guilt. While it may be possible that institutional factors may skew prosecutorial preferences away from those of the public in the way Dharmapala, Garoupa, and McAdams suggest, it is by no means clear that this will be the case (the authors themselves are ambivalent on this question), nor does such prosecutorial bloodthirstiness seem safe grounds for protecting the rights of the innocent.


185 Interestingly, in the civil context, Diamond and Vidmar's study of juror deliberations showed that blindfolding juries regarding insurance possession is primarily motivated by a perceived need to prevent juries from awarding the plaintiff damages
sionary rule is built on the rationale that it will protect defendants, and so indirectly safeguard non-defendants, from police incursions. But we have seen that because of the effect at the policing stage, non-defendants are not protected at all, even on the Court’s own logic; and because of the effect at the trial stage, many defendants are harmed by the rule, particularly those most likely to be actually innocent.

III. Possible Solutions and Their Limits

This Part briefly addresses possible solutions to the problems associated with the exclusionary rule and their limits. Previously proposed solutions take the form of two categories. First, there are three potential solutions to the specific problem of the operation of the rule at the trial stage, described in Part II: they are jury instructions, evidentiary rules, and a proportional exclusionary rule. I show that these proposals cannot solve the problem. Second, there are alternatives that have been proposed by other scholars in lieu of the exclusionary rule, the most influential of which is expanding § 1983 civil remedies. The advantages and disadvantages of this option will only very briefly be described here, since others have far more comprehensively explored the topic. Importantly, no alternative provides a means of assessing the broad secondary jurisprudence—such as the various rules that define when a search or seizure has occurred—which has been perverted by the problems of the exclusionary rule described in the last two Parts, and further distorted by judicial unwillingness to apply the rule, for the same reasons. I describe that judicial exacerba-

tion, then propose a solution.

A. Jury Instructions Are Not a Solution

Part II outlined three consequences of the operation of the exclusionary rule at the trial stage: juror resistance, juror error, and perverse screening. Stronger jury instructions may appear to be a plausible response, if the problem is not that the exclusionary rule is too strict, but rather it is not enforced strictly enough: to the extent that jurors disobey the rule, judges should be more severe with jurors even when the defendant is not negligent, due to an expectation that there will be a deep-pocketed insurer to foot the bill. But Diamond and Vidmar find, in fact, that the most frequent discussion of insurance concerns whether plaintiffs’ awards should be reduced out of an expectation that the plaintiffs have insurance. Diamond & Vidmar, supra note 109, at 1889. Thus, like the exclusionary rule, the blindfolding rule may actually hurt those it is meant to protect.

to ensure that they properly apply it. However, the obvious difficulty with this suggestion is that there is overwhelming evidence that not only do jurors not obey the exclusionary rule, but they actively resist judicial instructions to follow it.\textsuperscript{187} The more severe the judicial instruction, the stronger the backfiring effect.

As discussed, most people oppose the exclusionary rule, and efforts to make them enforce a remedy they strongly disagree with is likely to strengthen the counter-reaction to its imposition.\textsuperscript{188} Instead of staunching juror disobedience to the rule, such instructions may simply raise the question in the jurors’ minds: “should we be discounting the prosecutor’s burden, as it sounds as if something has been excluded?” As such, this proposal can easily be rejected.

B. Mitigation Through Evidentiary Rules Is Not an Adequate Solution

A second possible response to the problems created by the exclusionary rule is that its perverse screening effect can be mitigated through secondary evidentiary rules. Defendants who are actually innocent can signal their innocence in various ways, and in doing so undermine some of the rule’s deleterious effects. While there are a number of evidentiary mechanisms that allow for signaling to help differentiate between innocent and guilty defendants, the benefits of these mechanisms are limited. Before examining those limits for the exclusionary rule, it is worth considering the effect of such evidentiary rules on similar jury blindfolding techniques—limiting admission of character evidence and prior convictions—which provides an illuminating contrast.

Defendants can submit character evidence to rebut any evidence of lack of credibility.\textsuperscript{189} Both innocent and guilty defendants can avail themselves of this option, but submitting good character evidence allows in bad character evidence.\textsuperscript{190} The assumption behind allowing any character evidence is that good character will correlate strongly with actual innocence and bad character will correlate with actual guilt. If this is true, then this rule will primarily help the actually inno-

\textsuperscript{187} See supra Part II.B.
\textsuperscript{188} See supra text accompanying notes 123, 142.
\textsuperscript{189} FED. R. EVID. 608(a) (“The credibility of a witness may be attacked or supported by evidence in the form of opinion or reputation, but . . . character is admissible only after the character of the witness for truthfulness has been attacked by opinion or reputation evidence or otherwise.”).
\textsuperscript{190} FED. R. EVID. 404(a)(1) (“Evidence of a person’s character or a trait of character is not admissible for the purpose of proving action in conformity therewith on a particular occasion, except: (1) . . . In a criminal case, evidence of a pertinent trait of character offered by an accused, or by the prosecution to rebut the same . . . .”).
cent, who will have much greater freedom to introduce evidence of
good character without fear of evidence of bad character following as
a result. Thus, rational jurors will conclude that defendants who do
not introduce evidence of good character are refraining from doing
so because there must be damning evidence of bad character, suggest-
itive of guilt.

Similarly, prior conviction evidence is ordinarily not admissible to
evince the defendant's lack of good character or tendency to commit
crimes; however, if the defendant has already introduced evidence of
good character, the prior conviction evidence can be introduced. 191
This rule will unravel the lack of distinction between those who do
and do not have prior convictions: those without prior convictions
could confidently introduce evidence of good character, and those
with prior convictions would not. A defendant with a clean record is
free to announce she has no prior convictions and introduce charac-
ter witnesses; but, because a defendant with priors cannot do so with-
out fear of the prosecutor introducing her priors in response to good
character evidence, jurors will generally be able to infer from what is
and is not said whether the defendant has a criminal record. 192 Thus,
a rational juror would conclude that defendants who did not intro-
duce evidence of good character must have prior convictions.

In both the case of character and prior conviction evidence, this
kind of testimony can be a signal that provides greater accuracy to the
jury. Mention of these factors by the defendant would constitute a
signal that the defendant is innocent, and the lack of provision of that
information would only come from a defendant who wishes to hide
evidence of guilt. Exercises of the exclusionary rule in the Fourth
Amendment context are somewhat similar, but also importantly
different.

Defendants against whom there was no actual evidence found in
a search can make a much broader claim about the reason for the
absence of any evidence than those defendants against whom evi-
dence was found but suppressed. For instance, in a homicide trial, a
defendant whose home was searched but the search did not produce
the murder weapon can claim: "The prosecution has not produced a
weapon, because there is no weapon—the police searched my house
and found nothing." Whereas a defendant whose home was searched

191 Id.
192 See Allen & Laudan, supra note 171, at 19 ("Short of curtailing a defendant's
right to present evidence of his clean record (which would be wholly unacceptable),
there seems to be no way to protect the defendant with prior convictions from jurors' inferences that he has them.").
and the police found the murder weapon, but the evidence was suppressed due to the illegality of the search, cannot make such a claim. That defendant can only say: "The prosecution has not produced the murder weapon."  

As with character and prior conviction evidence, it is possible that this difference could unravel the lack of distinction that otherwise would exist between those who have and have not benefited from an exercise of the exclusionary rule. A rational juror may conclude that a statement such as "the prosecution has not produced the murder weapon," absent further information, is actually an inculpatory statement by virtue of the defendant's failure to say "because when they searched my house they found nothing." However, with character evidence, for the pooling between defendants with bad character versus good character (or prior convictions versus lack of prior convictions) to unravel, the jury needs only to expect some evidence of character to be mentioned one way or another. In the search context, by contrast, jurors would have to be more sophisticated to make the appropriate inference that differentiated effectively between defendants who were or were not found with a murder weapon. They would need to know not only that there should have been reference to the absence of evidence, but also to the nature of the reasons for that absence of evidence.  

This Article has presented extensive evidence of the ability of jurors to make inferences from hidden information, but the level of sophistication required to differentiate between mere mention of lack of evidence compared to specific statements about the cause of the lack of evidence may well be expecting too much of jurors. It rests not only on jurors knowing about the exclusionary rule, but under-

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193 A defendant who has successfully exercised the exclusionary rule cannot even imply a failure of the search to produce the weapon. For example, if there was an unproductive search of the defendant's house but the gun was found in the defendant's car, but the gun was excluded due to the illegality of the search, the defendant cannot say, "the prosecution have not produced a weapon from their search of my house, because nothing was found there," because doing so would be misleading. See Fed. R. Evid. 403 ("Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of . . . misleading the jury . . . ").

194 The extensive political science literature on both voter ignorance, see e.g., James H. Kuklinski & Paul J. Quirk, Reconsidering the Rational Public: Cognition, Heuristics, and Mass Opinion, in ELEMENTS OF REASON 153 (Arthur Lupia et al. eds., 2000), and the extent to which it is quite rational, see Anthony Downs, An Economic Theory of Democracy (1957), suggests this may be overly optimistic.
standing the operation of these more sophisticated criminal procedural rules.195

Even if jurors are capable of making this more sophisticated inference, these rules of evidence only offer a way of mitigating some of the extent of exclusionary rule error; evidentiary rules cannot fully combat the perversities of exclusion. Rather, evidentiary rules undermine the exclusionary rule's intended masking effect by giving strong hints to jurors that it was operational. As such, these rules undermine the operation of the exclusionary rule, but do nothing to provide any actual defense of its logic.

They also only partially combat the perversities of the exclusionary rule. The evidentiary rules provide a mechanism of inference in order to combat other inferences otherwise being made—despite the compounding ambiguity implied by that description, the evidentiary rules actually increase the accuracy of the criminal justice system, but only by revealing what the exclusionary rule seeks to hide. These evidentiary rules only salvage the exclusionary rule to the extent that they undermine it: they return the accuracy of the criminal justice system back to what it would have been without the exclusionary rule only when they entirely eradicate its effect. Full eradication is unlikely in practice, so this does not solve the problem of exclusionary rule perversity and primarily acts to highlight the extent of the rule’s theoretical shortcomings.

C. Amending the Exclusionary Rule Will Not Work

Since part of the problem described in Parts I and II is that the exclusionary rule is dichotomous and disproportionate in its operation, rather than carefully calibrated to the nature of the constitutional violation or the crime charged, one response regularly offered to the problems of the exclusionary rule is to make its operation proportional. However, this proposal makes little sense under closer examination.

Under a proportionate rule, exclusion would hinge on whether the crime is relatively minor and the police violation is significant.196

195 By way of context, recent evidence shows that jurors are able, even without exposure to actual definitions, to understand, apply, and differentiate punishment for purposeful, negligent, and blameless offenses; however, they were not able to do so differentiating between knowledge and recklessness requirements. See Francis X. Shen et al., Sorting Guilty Minds, 86 N.Y.U. L. Rev. 1306 (2011).

196 See, e.g., Thomas & Pollack, supra note 88, at 33–34 (proposing a trifurcated proportionality system based on the seriousness of the offence, as well as the level of good faith or bad faith shown by the police officer); see also Amar, supra note 1, at 802–04 (proposing a "reasonableness test" weighing the gravity of the offence and the
For example, exclusion of the murder weapon for a minor police violation would not be proportional, but it might be for a serious police violation or for a less serious offense, such as drug possession. The aim of this proposal is to solve the problem that exists under the exclusionary rule, whereby the more guilty you are, the more you benefit, as well as to quell the public outrage associated with serious criminals being freed due to minor technical errors by the police.

The Supreme Court has issued hints that it would favor such an approach, with comments that the gravity of an offense should be relevant to whether the exclusion remedy applies, and contrasts being drawn between “flagrantly abusive violation[s] of Fourth Amendment rights, on the one hand, and ‘technical’ Fourth Amendment violations, on the other,” which “call for significantly different judicial responses.” Arguably, the Roberts Court is approximating a proportionality test in *Herring v. United States* by requiring that each application of the exclusionary rule must bear its own cost. The Court in that case deemed that the cost of the rule—which increases with both the importance of the evidence and the seriousness of the underlying offense—must be weighed against the rule’s deterrence effect in any scenario—which will also be determined by the importance of the evidence and the seriousness of the underlying offense. One interpretation of the Court’s approach is, therefore, that it is effectively adopting a proportionality requirement: for example, it

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197 See *Amar, supra* note 1, at 802 (arguing that rather than excluding evidence to free the guilty by applying the letter of the law, a reasonableness approach should be used).

198 See *Oaks, supra* note 21, at 724 (arguing that, unlike serious crimes such as murder, where public interest is focused on convictions, most searches are for victimless crimes, where the gravity of the offense is relatively low and public interest is primarily in visible enforcement, and do not provide conditions under which the exclusionary rule would foster deterrence).


202 See *id.* at 140–47. Another view is that the Court has moved from a determinate rule, albeit with a list of determinate exceptions, toward an indeterminate standard, involving balancing and case-by-case evaluations of the good faith exception to the exclusionary rule, the extent of culpability of law enforcement and the degree of attenuation between the misconduct and the discovery of evidence. Frank Cross et al., *A Positive Political Theory of Roles and Standards*, 2012 *U. Ill. L. Rev.* (forthcoming 2012).
extended the good faith rule because the deterrence effect is lower than in the case of intentional violation, but the cost could be high. However, another interpretation is that the test is meaningless on its own premises, given that according to the Court, it is the very costliness of exclusion that creates deterrence.

Even on the more generous interpretation that the Roberts Court is adopting a proportionality approach, it still faces certain problems. On one hand, there is evidence that the under-enforcement that the exclusionary rule currently faces approximates a de facto proportionality approach, since roughly a third as many judges and lawyers believe that the rule operates as a deterrent in small cases as believe it does so in big cases. But this outcome raises serious legitimacy concerns, because it means that a defendant's rights decrease as the length of the potential sentence he is facing increases. On the other hand, the social psychology evidence shows that mock jurors are more likely to follow judicial instructions to not consider inadmissible evidence in serious crimes of homicide and arson, but do consider the evidence in less serious cases, such as vandalism, seemingly because due process concerns seem more important for serious offenses. This suggests that the exclusionary rule is more likely to be followed by jurors for serious offenses than minor offenses. As such, a proportionality rule could still be ignored by jurors, or even reversed.

D. Abolishing and Replacing the Exclusionary Rule

The exclusionary rule is justified largely on the basis that no other remedy works: civil suits under-deter, given that most Fourth Amendment violations involve nominal damages; injunctions are

203 See Orfield, supra note 18, at 88.
204 See Lieberman & Arndt, supra note 99, at 687 (summarizing the social psychology evidence and studies that indicate that jurors have greater concern for due process when a defendant is charged with a serious crime).
205 Note, however, that Lieberman and Arndt warned that these results may vary when actual jurors are faced with the prospect of letting a dangerous criminal free into society. Id.
206 See Mapp v. Ohio, 367 U.S. 643, 652–53 (1961) ("The obvious futility of relegating the Fourth Amendment to the protection of other remedies has, moreover, been recognized by this Court since Wolf v. Colorado, 338 U.S. 25 (1949).").
207 See Alan K. Chen, Rosy Pictures and Renegade Officials: The Slow Death of Monroe v. Pape, 78 UMKC L. Rev. 889, 914 (2010) (arguing that the nature of civil damages in these proceedings are either inconsequential or intangible, which makes the plaintiff’s incentive to bring suit relatively small and the incentives for attorneys working on contingency fees even lower).
ineffective because they require a pattern of violations; and criminal prosecutions of police are unlikely because prosecutors will not often prosecute those they need to work closely with. Nevertheless, due to the rule’s many flaws, and given that the claim that no other remedy works is empirically questionable, there is a large literature proposing its abolition and advocating alternatives. The primary alternatives is for an alternative form of civil liability for individual police wrongdoers or their departments, including administrative remedies.

Many scholars have proposed that civil remedies avoid many of the disadvantages of the exclusionary rule, offering greater deterrence and more properly fitting with the Constitution’s actual command. A system of civil liability already exists in § 1983 liability, which now applies to municipal officers, state officers and police departments, as well as federal officers. However, there is con-

208 See City of Los Angeles v. Lyons, 461 U.S. 95, 111 (1983) (“Absent a sufficient likelihood that he will again be wronged in a similar way, [a plaintiff who has been subject to an illegal police chokehold that rendered him unconscious and damaged his larynx] is no more entitled to an injunction than any other citizen of Los Angeles . . . .”). However, Congress has passed legislation, 42 U.S.C. § 14141 (2006), that allows the U.S. Attorney General to seek an injunction against local police departments that have demonstrated a “pattern of practice” of constitutional violations. The focus of the Department of Justice in investigating these patterns or practices “has been to implement prospective, forward-looking measures that are designed to influence the current organizational culture of the particular department.” Kami Chavis Simmons, Cooperative Federalism and Police Reform: Using Congressional Spending Power to Promote Police Accountability, 62 Ala. L. Rev. 351, 356 (2011).

209 See generally Harris, supra note 25, at 192–93 (asserting that there is no meaningful remedy for those illegally searched, aside from the exclusionary rule).

210 See generally Slobogin, supra note 149 (arguing for the rule’s abolition).


212 See, e.g., Mialon & Mialon, supra note 20, at 36–37 (showing that the more accountable the police are for their mistakes, the more likely that illegal searches will be reduced); Perrin et al., supra note 18, at 737 (explaining that Fourth Amendment violations “bleed into a wide variety of traditional tort claims”).

213 See Amar, supra note 1, at 758 (arguing that the Fourth Amendment, as well as early English law, “presupposes a civil damage remedy, not exclusion of evidence in criminal trials”).


215 See Monell v. Dep’t of Soc. Servs., 436 U.S. 658, 701 (1978) (extending the reach of § 1983 to municipalities and other local entities); Monroe v. Pape, 365 U.S. 167, 173–76 (1961) (finding that § 1983 was written in broad language designed to provide a remedy against those who are unwilling or unable to enforce state law and the Constitution).

siderable disagreement in the literature over whether § 1983 is effective at deterring police wrongdoing. Since many consider § 1983 ineffective, proposals have been made to strengthen it—for example, through imposition of strict liability. A strengthened tort remedy would arguably solve the problem of the exclusionary rule’s over-deterrence of police, and be more efficient than the exclusionary rule, because when combined with minimum liquidated damages awards and attorney’s fees, a liability scheme could be perfectly calibrated to each factual case of police misconduct, so as to create the perfect level of deterrence. However, this reform could be worse than the exclusionary rule’s over-deterrence.

Personal liability would overly discourage officers from enforcing the law in close situations—officers would err on the side of not conducting a search, in the interest of self-preservation. When a police department searches, it generates diffuse benefits and concentrated harms, but unlike most private actors, “public officials typically cannot appropriate for themselves the benefits of good performance, which tend to run to the public at large. The result is a skewed incentive structure that may conduce to defensive, cost-minimizing behavior inimical to the public interest.”

ney’s Fees Awards Act of 1976, which authorized courts to award attorney’s fees to plaintiffs who prevail in a § 1983 claim. However, municipalities have immunity against punitive damages, unless specifically authorized by statute. See City of Newport v. Fact Concerts, Inc., 453 U.S. 247, 259–60 (1981). But, damages are available against officials in an individual capacity when the defendant has acted recklessly, with “callous indifference” to the rights of others, or has “evil motive or intent”. Smith v. Wade, 461 U.S. 30, 56 (1983). See generally Chen, supra note 207, at 914 (arguing that the Court, through a series of decisions, has undermined the ability of plaintiffs to recover fees).

217 Compare Bandes, supra note 184, at 7–8 (arguing that there are still high barriers to such suits, due to difficulty finding lawyers to sue police, to convince juries, and to collect damage awards against police officers who may be judgment proof), with Hudson v. Michigan, 547 U.S. 586, 598 (2006) (“As far as we know, civil liability is an effective deterrent [in knock-and-announce violations] . . . .”).


219 See Posner, supra note 140, at 640–41. Posner acknowledges that making individual officers liable would create over-deterrence, since police are salaried and do not receive any financial benefit for their successes but bear the cost of their errors; however, he argues this can be fixed by providing immunity for police officers but not for the police department, which would give the department an incentive to prevent misconduct by the officer.


221 Jeffries, supra note 218, at 74.
There are two key facts that suggest that the over-deterrence argument is correct, because we observe the type of under-enforcement in civil remedies associated with overly hard shoves. First, juries are reluctant to find police officers personally liable under § 1983 actions. Second, despite the unpopularity of the exclusionary rule, 57% of police officers prefer the rule to monetary fines and other alternative remedies.

In addition to over-deterrence dangers, civil remedies may also have many of the drawbacks of the exclusionary rule. For egregious misconduct, civil remedies are likely to be successful, but for more typical, harassing searches, police are seldom likely to be punished. At least partly in response to these criticisms, a variation of civil remedies has been proposed, using an administrative scheme instead; but, whether altering the forum of the arbitration solves the problems described is questionable. For instance Perrin et al. advocate for an administrative law version of § 1983 whereby the exclusionary rule still applies to intentional or willful misconduct, and other violations are addressed by a civil administrative process with monetary damages. But arguably, this scheme adopts all of the disadvantages of a proportionate exclusionary rule, as discussed above, as well as the disadvantages of civil remedies.

In its current form, then, § 1983 civil actions are under-enforced, and thus do not provide adequate protection to citizens subject to harassing searches by police that do not lead to criminal charges, and such under-enforcement is to be expected if civil actions are directed at individual police officers. However, it is quite plausible that § 1983 actions could be made more substantive in its protection of ordinary citizens, and to the extent such fines are directed at departments rather than individual police officers, under-enforcement may be solvable. In that case, the Court would no longer be able to say, in justify-

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222 For this reason, Kahan argues civil remedies are less likely to constitute hard shoves. Kahan, supra note 142, at 642.

223 See Amsterdam, supra note 61, at 787 ("Juries are not sympathetic to suits against the police; policemen are seldom sufficiently solvent to make verdicts against them worth the trouble . . . .")

224 Perrin et al., supra note 18, at 732, 733 tbl.7.

225 See Osborne, supra note 41, at 385.

226 See Amar, supra note 1, at 800–19; Perrin et al., supra note 18, at 736–53; Slobogin, supra note 149, at 405–18.

227 Perrin et al., supra note 18, at 744–47 (describing a scheme modeled on the California Employment and Housing Act, administered by the Administrative Procedures Act, where the complainant would have the burden of establishing a violation, then the officer would have the burden of showing good faith, under an expanded good faith exception).
ing the exclusionary rule, that there is no meaningful alternative to it. However, even if that were the case, there would still be a pressing problem that is not addressed by any alternative to the exclusionary rule. Namely: the same mischief identified in Part II of this Article—that jurors under-enforce the rule and, in doing so, harm the interests of innocent defendants—also applies to judges, both in applying the rule and shaping secondary doctrines of Fourth Amendment law. As such, the exclusionary rule is not the only problem that requires reform: whether the rule is abolished and replaced with civil liability, or addressed by some other solution, it is necessary to have a solution that also addresses these secondary doctrines. I propose that ancillary rules should be assessed in terms of their guilt-innocence differentiation, which would fix much of the jurisprudential disorder and provide both police and courts with guidance as to how to go forward. Before providing this solution, I describe the problem of judicial exacerbation of the exclusionary rule distortions described in Parts I and II.

E. Judicial Distortion of the Exclusionary Rule

For advocates of the exclusionary rule, the great tragedy of recent jurisprudence has been the erosion of the strength of the rule: courts have developed numerous exceptions, a process which has arguably steadily eroded Fourth Amendment protections over time. But while scholars may lament this progression, it is important to recognize that the exclusionary rule itself is responsible for much of this doctrinal development. Just as the type of under-enforcement by police and juries that we saw in Part II was exactly the avoidance predicted of hard shove rules like the exclusionary rule, so it is for judges. The unpopularity of the exclusionary rule combined with its extraordinarily rigid operation causes it to be under-enforced, and ironically, this leads to its own undermining. Opponents and supporters of


229 See, e.g., Amar, supra note 1, at 799–800 (“Judges do not like excluding bloody knives, so they distort doctrine, claiming the Fourth Amendment was not really violated. . . . At first they will say it with a wink; later, with a frown; and one day, they will
the exclusionary rule alike recognize this, even if they disagree about the conclusion to be drawn from it. But those who bemoan restrictions of the exclusionary rule on this basis fail to appreciate that it is an inevitable result of the exclusionary rule being such a hard shove.

There are two ways in which judges respond to the inherent overreach of exclusion and attempt to mitigate its effects: through avoidance and contraction. That is, trial court judges display similar resistance to jurors being reluctant to apply the rule in criminal cases; and higher court judges also display resistance, which leads to distortion of the doctrinal substance of associated rules, as they attempt to minimize the effects of exclusion. As a consequence, appellate judges both make errors and increase perverse screening, by confusing signals of guilt. Each of these manifestations are described in turn.

The unpopularity of the exclusionary rule, and the view by a majority of citizens that the courts are “too easy” on criminals, means that the “release of guilty defendants because of police misconduct outrages much of the public and pressures judges to manipulate the law to avoid application of the exclusionary rule.” It is not surprising then that at the trial level judges may be reluctant to apply the exclusionary rule in criminal cases. For elected judges, there are obvious electoral incentives to avoid appearing to let criminals off on technicalities. But more generally, judges often appear to be uncomfortable applying the rule, particularly for minor violations of police procedure, and especially in the case of more serious crimes. Judges are reluctant to free, or be seen to free, seemingly guilty defendants, so they manipulate the jurisprudence so as to avoid exclusion. As Judge Guido Calabresi put it:

Judges—politicians’ claims to the contrary notwithstanding—are not in the business of letting people out on technicalities. If anything, judges are in the business of keeping people who are guilty in on technicalities. . . . [T]he judge facing a clearly guilty murderer or rapist [claiming a Fourth Amendment violation] will do her best to come to believe it. . . . [E]ven if exclusion achieves short-term deterrence, it creates long-term instability . . . ."

230 See, e.g., Loewy, supra note 48, at 1270-72 (arguing that the Supreme Court’s current trend is to favor an innocent person’s rights less and less because there is hostility towards the exclusionary rule, a trend that should be reversed).

231 See supra Part II; see also Opinion Roundup, 5 PUB. OPINION 26 (1982) (showing that in Lou Harris and Associates opinion polls, the percentage of respondents saying the courts have been “too easy” on criminals increased from 52% in 1967 to 83% in 1981).

232 Perrin et al., supra note 18, at 752-53.
protect the fundamental right and still keep the defendant in jail.\textsuperscript{233}

The willingness of trial court judges to undermine the exclusionary rule was documented by Myron W. Orfield, Jr., in his interviews with judges and attorneys. Orfield found a general unwillingness of judges to apply the exclusionary rule. A remarkable 82\% of responses from attorneys, judges, and other officials, and 81\% of responses from judges alone reported that they believed that judges “fail to suppress evidence when they know police searches are illegal.” Also, 67\% of both judges and attorneys believed that judges “unreasonably strain interpretation of the law to prevent suppression of evidence.”\textsuperscript{234}

In addition, Orfield’s interviews revealed a distinction between “nothing” cases and “heater” cases—a differentiation between minor crimes and big cases that were likely to “arouse public ire if the defendant [went] free for procedural or technical reasons.”\textsuperscript{235} In Chicago, heater cases were removed from normal random judicial assignment and diverted to “heater judges”—pro-prosecution judges whose conviction rates were particularly high.\textsuperscript{236}

The more important the case, the less likely the judge would protect the defendant’s Fourth Amendment rights: Orfield found that 68\% of respondents and 46\% of judges stated that evidence was more likely to be suppressed in a small case.\textsuperscript{237} Orfield’s findings suggest that the longer the likely sentence the defendant faces, the lower his constitutional protections will in effect be. Thus, we see that, by being overly broad, the exclusionary rule in fact undermines protection for Fourth Amendment violations.

As explained in Part II, we need to understand how the exclusionary rule operates in the courtroom because that feeds back into its effect at the policing stage. This effect is illustrated by judges’ interactions with police officers. Not only have studies shown that the exclusionary rule incentivizes police perjury,\textsuperscript{238} judges themselves report knowingly accepting police perjury as truthful to avoid applying the exclusionary rule. In Orfield’s interviews, 72\% of respondents, including 58\% of judges, reported that judges are “biased in favor of the prosecution and less likely than they should be to disbelieve police testi-

\textsuperscript{234} Orfield, \textit{supra} note 18, at 119 (internal quotation marks omitted).
\textsuperscript{235} \textit{Id.} at 116.
\textsuperscript{236} \textit{Id.}
\textsuperscript{237} \textit{Id.} at 117 & n.189.
\textsuperscript{238} \textit{See supra} Part I.C.
mony" in big cases. By their own accounts, the exclusionary rule causes trial judges to bias their rulings against the protection of Fourth Amendment rights, suggesting that the deterrence value of the rule for police is quite low, and compounding the other ill effects of the exclusionary rule.

The second way that judges mitigate the effect of the exclusionary rule is at the appellate level, through the formation of law. Since Mapp, numerous cases in various areas of constitutional criminal law have developed rules that strain the definitions of searches and seizures. These rules constitute doctrinal distortions that arise out of higher court judicial attempts to narrow the application of the exclusionary rule. Such attempts to mitigate the ill effects of the exclusionary rule create confused jurisprudence, which will necessarily result in unfair outcomes. Harris describes the problem:

Judges, like other citizens, sometimes find the windfall received by guilty defendants hard to stomach, and may attempt to avoid this outcome in cases before them. This occurs at every level of the judiciary: state and federal, trial and appellate. When trial judges find a case before them calling for exclusion of the evidence because of the violation of search and seizure rules, they may adopt a distorted view of the facts in order to find the relevant police actions within the parameters of existing law. Worse yet, trial judges and appellate judges may find themselves making decisions and writing opinions that distort and bend the law in order to avoid suppressing the evidence. Judge Guido Calabresi describes the process this way: ... "This means that in any close case, a judge will decide that the search, the seizure, or the invasion of privacy was reasonable. That case then becomes the precedent for the next case. The next close case comes up and the precedent is applied: same thing, same thumb on the scale, same decision. ... [C]ourts [thus] keep expanding what is deemed a reasonable search or seizure."241

So whereas the exclusionary rule causes distortion of the facts, which is problematic because it fails to recognize or remedy violations of individual defendants' Fourth Amendment rights, its effect on doctrine is worse, as this causes a ratchet effect, whereby future violations are even less likely to be dealt with. This process of deforming search and seizure doctrine so as to avoid the undesirable effects of the exclusionary rule in turn affects police incentives. Each contortion of

239 Orfield, supra note 18, at 118.
241 Harris, supra note 25, at 191 (alteration in original) (quoting Calabresi, supra note 233, at 112).
the law makes it more complex and difficult for police officers to understand or apply; consequently, an officer is less likely to be deterred, and so the rule actually may increase police violations.\textsuperscript{242} Some examples of these doctrinal distortions are presented in the following section. I then shows how these doctrinal convolutions can be avoided by focusing instead on crafting doctrines to better screen between innocent and guilty defendants.

\textbf{F. An Alternative Approach}

Since much of this jurisprudential manipulation appears to be driven by a desire to avoid the cost of “letting the criminal go free,” a better, more direct way to achieve that goal is to embrace rules that aid screening between innocent and guilty defendants and forego rules that blur those categories. This may sound obvious, as it is the role of the criminal justice system to sort innocent from the guilty, but in fact numerous Fourth Amendment doctrines do the opposite. Assessing whether the exclusionary rule should be kept or abolished is only the first step in the analysis: either way we will be left with numerous doctrines that undermine guilt-innocence screening, that have been developed as part of judicial attempts to avoid the application of the exclusionary rule. I propose that a core criterion in assessing whether Fourth Amendment doctrines should be embraced or rejected is whether they create ideal or perverse screening, of the type described in Part II. This will complement rather than replace other criteria, such as the level of intrusion or greater protection given if the search was of a home. An analysis of \textit{United States v. Place}\textsuperscript{243} and associated cases illustrates both the type of jurisprudential distortion that appellate judges are guilty of and how focusing on innocence-guilt screening offers a manifestly superior approach, while avoiding harm to innocents.

In \textit{Place}, defendant Place aroused suspicion of law enforcement officers while waiting to board a flight at Miami International Airport.\textsuperscript{244} The Drug Enforcement Administration (DEA) met Place

\begin{itemize}
\item \textsuperscript{242} See Perrin et al., supra note 18, at 676 (“The courts, in their efforts to avoid exclusion, contort and complicate the law of search and seizure, thus making the body of law more difficult to understand and consequently more difficult for police officers to follow. Without a clear understanding of what is not permissible under the law, the officer is not likely to be deterred from misconduct and thus his action may lead to even more opportunities for exclusion.”).
\item \textsuperscript{243} 462 U.S. 696 (1983).
\item \textsuperscript{244} The officers requested consent to search Place’s suitcases, which he gave, but they refrained from a search because his flight was about to depart. But, they did check his address tags and found some discrepancies between them and, subse-
The agents requested but did not receive his consent to search his two suitcases; the agents nevertheless confiscated his bags and took them to Kennedy Airport, where they subjected them to a “sniff test” by a trained narcotics detection dog. The dog reacted positively to one bag and ambiguously to the other. The sniff test occurred approximately ninety minutes after the seizure of the luggage, late on a Friday afternoon. The agents retained the luggage until Monday morning, when they obtained a search warrant and discovered enough cocaine to charge Place with intent to distribute. The Supreme Court addressed whether the sniff test constituted an unreasonable search and whether retention of the bags constituted an unreasonable seizure.

The Court recognized the strong governmental interest in “preventing the flow of narcotics into distribution channels,” which allows “police to make brief investigative stops of persons at airports on reasonable suspicion of drug-trafficking,” particularly given the inherently transient nature of drug courier activity. The Court considered brief detentions of a person’s luggage, to investigate the cause of any reasonable suspicion, to constitute minimal intrusions that do not overwhelm the government’s strong countervailing interest in law enforcement.

In terms of a seizure, the Court concluded that a Terry-style investigative stop could justify holding the luggage, requiring only reasonable suspicion. In contrast, the Court confirmed that a search could not be justified on less than probable cause; however, the Court determined that investigation by a drug sniffing dog does not constitute a search for Fourth Amendment purposes. As such, the drug dog’s positive alert for contraband can itself provide reasonable suspicion for a seizure or probable cause for a search inside the bags—whereas if the dog sniff itself is the search, probable cause would be required before it was undertaken.

...
The reasons the Court gave for this determination were that the canine sniff did not require opening the luggage, and it did not expose non-contraband items to public view. Consequently, it constituted much less intrusion than a typical search, such as an officer physically inspecting the contents of the luggage. In addition, the only information the canine sniff revealed was whether narcotics were present in the bag, thus the information obtained was also more limited than more typical but “less discriminate and more intrusive investigative methods.” The Court concluded that “exposure of respondent’s luggage, which was located in a public place, to a trained canine—did not constitute a ‘search’ within the meaning of the Fourth Amendment.”

The factors that the Court considered are highly relevant to the determination of whether Place’s Fourth Amendment rights were violated, but not for the reasons that the Court gave. These factors do not show that the canine sniff was not a search, but rather that the search was reasonable. This distinction has great significance for future police “searches.”

The Court mentioned in its conclusion that the sniff occurred in a public place, but in Bond v. United States, the Court found there was a reasonable expectation of privacy in luggage on a bus, so it is unlikely that the fact that the airport was a public place was a significant factor. Rather, it is the limited extent of the intrusion and the limited nature of the information revealed by the canine sniff that seems to have been determinative here; however, neither of these factors greatly further the majority’s argument.

First, the limited nature of the physical intrusion is relevant to the reasonableness of the search, but far less pertinent as to whether a search occurred. As the Court has spelled out, the test of reasonable-
ness under the Fourth Amendment requires a balancing of the need for the particular search against the invasion of personal rights that the search entails. Courts must consider the scope of the particular intrusion, the manner in which it is conducted, the justification for initiating it, and the place in which it is conducted.\textsuperscript{256}

Thus, the intrusion of physically penetrating a person's body to retrieve a bullet for the purposes of evidence gathering was considered so high as to render such a search unreasonable.\textsuperscript{257} In contrast, body cavity searches of pre-trial detainees after custodial visits are highly intrusive but nonetheless rendered reasonable in the context of the diminished expectation of privacy that exists after commitment to a custodial facility.\textsuperscript{258} Similarly, drawing blood involuntarily from an arrestee for purposes of chemical testing "plainly involves the broadly conceived reach of a search,"\textsuperscript{259} but whether such a search is reasonable hinges on the extent to which the interests of human dignity and privacy forbid such an intrusion.\textsuperscript{260} Since such tests are highly efficacious, and given blood tests involve a minimal extraction in a procedure that "involves virtually no risk, trauma, or pain," the Court held it to be reasonable.\textsuperscript{261} These cases illustrate that the extent of the physical intrusion factors heavily into the assessment of reasonableness, but each of these activities was clearly a search.

Reasonableness itself is relevant to whether a search occurred, but only to the extent that the expectation of privacy must be both subjectively held and objectively reasonable for a search to be deemed to have occurred.\textsuperscript{262} But reasonableness in this sense is relevant to determining whether the individual's expectation, "viewed objectively, is 'justifiable' under the circumstances."\textsuperscript{263} If that reasonable expectation is established, then any imposition on the expectation constitutes

\begin{itemize}
  \item \textsuperscript{256} See Bell v. Wolfish, 441 U.S. 520, 559 (1979).
  \item \textsuperscript{257} See Winston v. Lee, 470 U.S. 753, 759 (1985) ("A compelled surgical intrusion into an individual’s body for evidence, however, implicates expectations of privacy and security of such magnitude that the intrusion may be ‘unreasonable’ even if likely to produce evidence of a crime.").
  \item \textsuperscript{258} Bell, 441 U.S. at 558 ("The Fourth Amendment prohibits only unreasonable searches, and under the circumstances [of commitment to a corrections facility], we do not believe that these searches are unreasonable." (citation omitted)).
  \item \textsuperscript{259} Schmerber v. California, 384 U.S. 757, 767 (1966).
  \item \textsuperscript{260} See id. at 769–70.
  \item \textsuperscript{261} Id. at 771.
  \item \textsuperscript{262} See Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring) ("[T]here is a twofold requirement, first that a person have exhibited an actual (subjective) expectation of privacy and, second, that the expectation be one that society is prepared to recognize as ‘reasonable.’").
  \item \textsuperscript{263} Smith v. Maryland, 442 U.S. 735, 740 (1979).
\end{itemize}
a search; it is a separate question whether that expectation has been unreasonably infringed upon.

It is conceivable that the extent of the intrusion could shape the nature of the inquiry over what the given reasonable expectation concerns. For example, whether a sniffer dog can detect drugs from across the room versus whether it has to actually put his nose on a person’s body will shape what the expectation concerns, bodily conduct or not. But this arises only as a result of the inherent circularity of the definition of what constitutes a search—not only because “reasonable expectation of privacy” introduces reasonableness into the equation in both defining a search and assessing its lawfulness, but also because whether an expectation of privacy exists will itself depend on the extent to which police regularly breach that expectation. Whether a search of a given type is regularly conducted will affect whether the ordinary person will have an expectation to be free of such interference, and thus will shape whether police action constitutes a search at all. As such, level of intrusion will only be relevant to whether a search was conducted at most as a marginal consideration, arising by virtue of this circular definition, a flaw the Court has previously recognized.264

More commonly, level of intrusion is relevant to the separate question of reasonableness, not of whether a search occurred.265 For instance, fingerprinting a free person requires probable cause,266 or at least an articulable suspicion,267 but fingerprinting an arrestee does not;268 the level of intrusion remains the same, but fingerprinting is considered routine and thus reasonable in the jail context. So consideration of the extent of the intrusion is highly relevant as to whether

264 See Kyllo v. United States, 533 U.S. 27, 34 (2001) (acknowledging that the reasonable expectation of privacy test “has often been criticized as circular, and hence subjective and unpredictable”).

265 See, e.g., id. at 34–35 (finding that obtaining information regarding the interior of a home without physical intrusion, which could not otherwise have been obtained without physical intrusion, nonetheless constitutes a search).

266 See Hayes v. Florida, 470 U.S. 811, 814 (1985) (finding that involuntary fingerprinting was unreasonable because “there was no probable cause to arrest, no consent to the journey to the police station, and no judicial authorization for such a detention for fingerprinting purposes”).

267 See id. at 816 (“[A] brief detention in the field for the purpose of fingerprinting . . . [may only require] a reasonable suspicion not amounting to probable cause . . . .”).

268 Smith v. United States, 324 F.2d 879, 882 (D.C. Cir. 1963) (“[I]t is elementary that a person in lawful custody may be required to submit to photographing and fingerprinting as part of routine identification processes.” (citations omitted)).
the search was reasonable, but seldom so for whether a search occurred.

When applied to the facts of *Place*, this distinction seems sensible; it is a strain to argue that allowing a trained narcotics dog to sniff around Place's luggage, isolated from all other luggage, is not a search. The purpose of the dog sniffing the luggage was to determine whether the contents were likely to be contraband; that positive determination then formed the basis for a search warrant for a closer inspection. The relative non-intrusiveness, however, is clearly relevant to whether that inspection was reasonable and will be addressed below.

The second factor that the Court pointed to, the minimal extent of the information revealed by the dog sniff, is also only relevant to the inquiry if it renders the search not over-inclusive, because the narcotic detection dog only picks up on contraband. This in turn relates back to the nature of the intrusion: there is only an intrusion to the extent that information is revealed, which only occurs if there is contraband contained in the luggage. As such, this factor is once again highly relevant to whether the search was reasonable, but not to whether there was a search.

If, instead, extent of information revelation is relevant to whether a search occurred, the doctrine becomes quite illogical. For the dog sniff not to constitute a search, there must be no reasonable expectation of privacy. But the question is: "In relation to what?" Ordinarily, whether an investigation of someone's luggage is a search hinges on whether he or she has a reasonable expectation of privacy in the contents of the luggage. But if instead whether a search has occurred or not depends on the fact that the sniffer dog perfectly screens between those possessing contraband and those not possessing contraband, then this implies that the relevant expectation of privacy lay in Place's interest in having *drugs not be discovered in his luggage*, rather than in not having his luggage examined at all.

The interest in not having drugs discovered in one's luggage cannot reasonably be the germane expectation of privacy. Framing the question in these terms is the sort of disingenuous calculation of the question that guarantees a predetermined answer—a practice that

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271 See *id.* at 707.

272 See *id.* at 706–07.
Brest labeled “manipula[tion] of [the] levels of generality.” It is akin to the Court’s since disavowed Bowers contemplation of “whether the Federal Constitution confers a fundamental right upon homosexuals to engage in sodomy”—an inquiry that was unsurprisingly unfruitful—rather than probing whether the right to privacy covers choice in one’s intimate relations—a concept much more likely to be found in the broad contours of the Constitution’s text. Phrasing an interest narrowly, in terms of a right to homosexual sodomy or an interest in not having drugs detected, ensures that it will not appear persuasive as a right that exists in the Constitution. Equivalently, presumably there is no reasonable expectation of privacy in hiding a murder weapon from the police in your car or in hiding a fugitive in your house, but that is not how we frame the question in such cases. Rather, we ask whether there is a reasonable expectation of privacy in having items in certain places in your car without them being subject to scrutiny and whether you have a right to privacy in your home. The two different sets of inquiries would produce very different answers.

So the fact that the canine sniff by a well-trained narcotics dog produces perfect screening cannot be determinative of whether there was a search, as it directs the Court’s attention to formulating the wrong reasonable expectation of privacy. And more generally, the

274 Bowers v. Hardwick, 478 U.S. 186, 190–91 (1986) (“[N]one of the rights announced in [earlier] cases bears any resemblance to the claimed constitutional right of homosexuals to engage in acts of sodomy that is asserted in this case.”).
276 Whether a dog sniff is really as accurate as the Court claims is a fair question. The Court reiterated this view in Illinois v. Caballes, 543 U.S. 405, 410 (2005) (“A dog sniff conducted during a concededly lawful traffic stop that reveals no information other than the location of a substance that no individual has any right to possess does not violate the Fourth Amendment.”). Justice Souter strongly challenged this factual claim, arguing that dog sniff tests return false positives anywhere from 12.5 percent to 60 percent of the time, and concluded that “[t]he infallible dog . . . is a creature of legal fiction.” Id. at 411 (Souter, J., dissenting); see also Andrew E. Taslitz, Does the Cold Nose Know? The Unscientific Myth of the Dog Scent Lineup, 42 HASTINGS L.J. 15 (1990) (concluding that, inter alia, scientific research is at too early a stage to justify admitting dog-sniffing identification in lineups as evidence in criminal trials). To the extent the Court is incorrect and the sniff is error-prone, this would factor into its reasonableness. For the moment, this analysis sets aside this accuracy debate and proceeds on the basis of the factual claim the Court made: that “the sniff discloses only the presence or absence of narcotics.” Place, 462 U.S. at 707. Below, I consider other forms of perfect screening.
level of intrusion is seldom determinative of whether a search exists. As such, neither of these factors indicate that the canine sniff was any different from other inspections of a person's luggage that have been found to be a search, and the Court erred in saying there was no search. But this does not mean that these two factors that the Court examined are not highly significant. Instead, the Court should consider these matters in relation to reasonableness, where the precedent shows they are clearly relevant.

The fact that the canine sniff is minimally intrusive and creates perfect screening should lead the Court to conclude that it is reasonable. As shown in Part II, the interests of the innocent and the guilty cannot be assumed to be aligned. Differentiating between the innocent and the guilty is in the interests of the innocent, but not of the guilty. Whether a doctrine differentiates in this way should be a central criterion in assessing its ongoing value.

As others have argued, "the [F]ourth [A]mendment exists to protect the innocent and may normally be invoked by the guilty only when necessary to protect the innocent."\textsuperscript{277} It is not unnatural, given the nature of Fourth Amendment precedent, which because of the aforementioned selection bias focuses primarily on the rights of the guilty, to instinctively think that an extremely powerful and accurate detection device is a greater imposition on privacy rights than the occasional rummaging of one's luggage. But that is only true if we value the ability of the criminal to escape undetected: if we only protect the guilty so as not to intrude on the innocent, rather than the reverse, then the more accurate and powerful a screening device is, the more reasonable it is.\textsuperscript{278}

According to the Court, the drug sniffing

\textsuperscript{277} Loewy, supra note 48, at 1248. Loewy argues that a guilty person lacks the right to secrete evidence, but nonetheless a guilty defendant can be "an incidental beneficiary of a rule designed to benefit somebody else—an innocent person who is not before the court." \textit{Id.} at 1230; see also \textsc{Akhil Reed Amar}, \textit{The Constitution and Criminal Procedure} 154 (1997) ("[T]he Constitution seeks to protect the innocent. The guilty, in general, receive procedural protection only as an incidental and unavoidable byproduct of protecting the innocent because of their innocence."); \textsc{William J. Stuntz}, \textit{Implicit Bargains, Government Power, and the Fourth Amendment}, 44 \textsc{Stan. L. Rev.} 553, 555 (1992) (arguing in the special needs context that the appropriate question is "what search rule would the government and innocent targets adopt if they were to negotiate the rule in advance?" and that such a negotiated search rule would avoid the government using alternatives to searching that "might well make innocent search targets worse off than they would be with the searches").

\textsuperscript{278} See \textsc{Amar}, supra note 277, at 154 ("Lawbreaking, as such, is entitled to no legitimate expectation of privacy, and so if a search can detect only lawbreaking, it generally poses little threat to Fourth Amendment values."); Loewy, supra note 48, at 1246 (concluding that "if a device could be invented that accurately detected weapons and
dog is a perfect screening device; as such, it should be ruled a reasonable means of searching, because the more that the criminal justice system differentiates between the innocent and guilty, the more it benefits the innocent.

This is only true, of course, if the device is also non-intrusive. Extremely intrusive searches may be very accurate, but not reasonable because of their adverse effect on innocent bystanders who are subject to the search along with the criminal. For example, strip searches at airports would detect most weapons, but are not reasonable because of the level of intrusion. The canine sniff is much less problematic than other similarly accurate types of searches because it involves less intrusion on innocents. But this is not simply a happy coincidence; rather, the two factors are closely related. The canine sniff is a perfect screening device not simply because it is extremely accurate, but because it reveals nothing else and thus harms no privacy interest. A strip search is accurate only after it is undertaken on innocent bystanders, requiring they be subject to the humiliation of being stripped. The canine sniff still requires a search be undertaken before it reveals its accurate results (if we reject the Court’s reasoning in Place), but a person’s bag only has to be opened once the dog registers positive for contraband.

Similarly, infrared thermal imaging is highly accurate, but fails the perfect screening criteria of revealing nothing else. In Kyllo v. United States, the Court held that, unlike the dog sniff, the police pointing an infrared thermal image at the home of a marijuana grower, which it subsequently used as probable cause for a warrant, was a search. In this case, the Court correctly recognized that perfect screening affected not whether infrared imaging was a search, but rather the reasonableness of the search. The search was held presumptively unreasonable because it “explor[ed] details of the home that would previously have been unknowable without physical intrusion”—i.e., the finding of unreasonableness hinged on the lack of perfect screening. The problem with the heat sensors was that they not only detect the illegal activity at issue, growing marijuana, but they also reveal other details of potentially intimate activities occurring within the home, such as human presence or even type of private activity.
In *Kyllo*, the Court crafted a special rule for inspecting details of the home that rendered it presumptively unconstitutional, something the dissent argued was unnecessary, potentially at odds with *Place*, and excluded objectively reasonable means of investigation.\(^\text{283}\) Putting aside the disputed exception for the home, about which there are many special rules, the remaining logic of the case is in accord with this proposal of recognizing the centrality of the level of screening the search provides. For example, if the government could show that only unnaturally high heat generated by halogen lamps specifically used for marijuana growing would be detected, in a place other than the home, this more perfect screening may render the search reasonable.

*Place* may seem in accord with the proposal developed here to promote rules that differentiate between innocent and guilty defendants as long as the intrusion is reasonable, but it is not. In terms of the outcome reached by the Court, declaring the canine sniff not to be a search effectively allows future searches of innocent persons when the search is not reasonable. By denying the fact that the sniff was a search, the Court never needs to inquire into its reasonableness, and so less reasonable searches will also be allowed.

The *Place* ruling appears to have arisen because the Court wanted to allow searches that effectively screen between innocent and guilty defendants. But doing so by refusing to call such inspections "searches" is not the right way to go about it. Such an investigation of someone's luggage clearly is a search, and the factors the Court used to show the dog sniff was not a search have been shown to be flawed. If instead the Court recognized that the very accurate screening made the search reasonable, it could do so without undermining doctrinal coherence.

The Court appears to recognize the doctrinal difficulties it was creating in *Place*, as it described the canine sniff as "sui generis," claiming that the Court was "aware of no other investigative procedure that is so limited both in the manner in which the information is obtained and in the content of the information revealed by the procedure."\(^\text{284}\) But this is patently false: alcohol breath testing is directly analogous, which can now be made unobtrusive enough to leave a driver unaware their alcohol content is being tested at all; facial character recognition technology allows large-scale public surveillance, comparison and identification; enclosed space heartbeat detectors can ascertain the presence of a person hiding in an enclosed space, such as a vehicle; gas chromatography can accurately detect explosives or drugs upon a

\(^{283}\) See *id.* at 47-48 (Stevens, J., dissenting).

person or object;\textsuperscript{285} X-ray scanners allow highly accurate, non-intrusive tests for weaponry; and thermal imaging devices can sense high-intensity heat consistent with marijuana growing technology. In 1983, when \textit{Place} was decided, much but not all of this technology did not exist, but now the ruling seems quite shortsighted, as it is clear that the dog sniff constituted the beginning of a progression in search technology that could massively change the interaction between search and seizure jurisprudence and the exclusionary rule.\textsuperscript{286}

If the government could create a mechanical drone that scouts public streets and is 100\% accurate in observing criminal activity, even if it scanned each person on the street, it would be reasonable, as long as that scan was non-intrusive. Some may have a reaction against such big brother technology, but in terms of Fourth Amendment, such searches are much less problematic than the more arbitrary forms of examination currently relied on by law enforcement, such as frisks. The increased ability to identify illegal behavior does not translate to greater intrusiveness: an accurate red light camera will impose more fines than an individual police officer personally witnessing such traffic violations, since the camera need not sleep, however the red light camera raises fewer Fourth Amendment concerns, as it involves no discretion on the part of the police. The more accurate the “evidence-detecting divining rod,” the more efficient and effective the search, and the more dramatic the decrease in the possibility that any innocent person will be subject to an unreasonable search.\textsuperscript{287}

We can now apply this screening criterion to some additional secondary rules in the area. The Court has appropriately recognized the

\begin{itemize}
\item \textsuperscript{285} For a discussion of each of the foregoing, see \textsc{Yale Kamisar et al., Modern Criminal Procedure} 274–75 (12th ed. 2008).
\item \textsuperscript{286} See Mialon \& Mialon, supra note 20, at 16–17 (modeling how future search technologies, such as biometric measures and DNA testing, can, by increasing the accuracy of police searches, lead to either a strong increase in crime and illegal searches or alternatively to a massive decrease). As search technologies become more accurate, the expected cost of committing crime will increase, however, as search technologies become more invasive, crime rates could theoretically increase, since, “[i]f [innocent citizens] have to suffer the costs of being treated like criminals...then they might as well also derive the benefit from actually being a criminal.” \textit{Id.} at 9. Such possibilities represent the danger of pretending that an investigation such as a canine sniff is not a search, rather than factually assessing its reasonableness, given its level of intrusion, its efficacy, and other such factors.
\item \textsuperscript{287} See Loewy, supra note 48, at 1244 (“[T]he fourth amendment should be understood as a device to separate the wheat (evidence of crime) from the chaff (that which individuals may possess free from government prying). In a Utopian society, each policeman would be equipped with an evidence-detecting divining rod. . . . [A]ll evidence of crime would be uncovered in the most efficient possible manner, and no innocent person would be subject to a search.” (footnote omitted)).
\end{itemize}
importance of screening in relation to its treatment of possessions that are inherently suggestive of guilt. Even in *Arkansas v. Sanders*—the case that, along with *United States v. Chadwick*, set out a rule that police are required to obtain a warrant before searching luggage taken from an automobile properly stopped and searched for contraband—the Court recognized that “[n]ot all containers and packages found by police during the course of a search will deserve the full protection of the Fourth Amendment. . . . [S]ome containers (for example a kit of burglar tools or a gun case) by their very nature cannot support any reasonable expectation of privacy because their contents can be inferred from their outward appearance.”

Similarly, a balloon full of heroin, knotted near the top, dropped from the hands of a driver stopped at a police license checkpoint, was able to be inspected because the incriminating nature of the items was “immediately apparent.” Some possessions are inherently guilt-associated—or to put it another way, are self-screening devices—and so the Court correctly determined in both of these cases that they do not deserve Fourth Amendment protection.

A final Fourth Amendment application, where screening cuts the other way, is *Florida v. Bostick*, in which two police officers boarded a bus as part of a routine drug interdiction. With no articulable suspicion, the officers asked to inspect the ticket and identification of Bostick, a passenger. The ticket matched Bostick’s identification, but the police nonetheless requested his consent to search his luggage for drugs and found cocaine. The question was whether Bostick was effectively seized prior to consenting to the search, in that a reasonable person in his situation would not have felt free to leave. The Supreme Court rejected the lower court’s finding that the cramped confines of the bus rendered it impossible to evaluate whether a passenger’s consent to a search is voluntary and its claim that giving the defendant only the alternative of being stranded if he attempted to

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291 *Texas v. Brown*, 460 U.S. 730, 737 (1983) (internal quotation marks omitted). These items were also seen with several plastic vials, quantities of loose white powder, and an open bag of party balloons in an open glove compartment, and so they also fit within the plain view exception. See *id.* at 734, 740.
293 *Id.* at 431–32.
leave rendered him confined in the relevant sense, which made the police action coercive.\textsuperscript{294}

Bostick denied providing consent, but the lower court decided that he did.\textsuperscript{295} However, it somewhat strains credulity that a drug carrier would voluntarily give consent to be searched in such a circumstance unless he already felt seized. In such circumstances, voluntary consent is not a good screening device, as both innocent and guilty defendants are likely to consent to unwanted searches because they already perceive themselves to have been seized. In fact, innocent citizens are more likely to consent than those actually carrying drugs, since they are already suffering the harm of an unreasonable search or seizure and would reasonably anticipate less harm from the additional intrusion of a search compared to being stranded on a journey or subject to potential police harassment. As such, screening analysis suggests that relying on manifestations of consent in such a scenario is poor jurisprudence that does harm to innocent citizens. In fact, sixteen years later, the Supreme Court concluded in similar circumstances that a passenger in a car is seized the moment the car comes to a stop at the instruction of the police; holding otherwise “would invite police officers to stop cars with passengers regardless of probable cause or reasonable suspicion of anything illegal” when such a search would be illegal as against the driver.\textsuperscript{296}

So it is clear that applying this screening criterion for secondary search and seizure jurisprudence can cut both ways, justifying some searches if they promote innocence-guilt differentiation, and undermining others, which mitigate such differentiation. There is precedent for this screening approach in other areas of constitutional criminal procedure. For instance, the Court in \textit{United States v. Wade}\textsuperscript{297} justified the requirement of having counsel be present at a lineup in screening terms: counsel’s presence cannot undermine the state’s legitimate law enforcement aim because having counsel “cannot help the guilty avoid conviction but can only help ensure that the right man has been brought to justice.”\textsuperscript{298} But there are also many rules that undermine differentiation between guilty and innocent, with little countervailing policy advantage. For example, threatening a sus-

\textsuperscript{294} See \textit{id.} at 436. Instead, all circumstances surrounding the encounter must be considered in ascertaining whether the defendant felt free to decline the request for a search or otherwise terminate the encounter with the police. See \textit{id.} at 439.

\textsuperscript{295} \textit{Id.} at 432.


\textsuperscript{297} 388 U.S. 218 (1967).

\textsuperscript{298} \textit{Id.} at 238.
pect at gunpoint does not violate the Fifth Amendment, despite the fact that it is likely to induce confessions by innocent as well as guilty suspects, but words or actions stated by the police that are likely to elicit an incriminating response from the suspect when counsel is not present do violate the Sixth Amendment even when they only likely to elicit a confession from a guilty suspect. Both of these rules undermine differentiation between innocent and guilty defendants—in the first case by incentivizing innocent defendants to confess, in the latter by discouraging guilty defendants from confessing.

The previous section showed that judges in courts of first instance often have incentives to mitigate the ill effects of the exclusionary rule, and so they bias their factual findings against recognizing Fourth Amendment violations. Place and Bostick are examples of the Supreme Court doing the same, but the effect is worse because the Court is not only failing to recognize searches and seizures that have occurred, but it is crafting rules that shape the incentives of future police conduct. In both cases, the Court developed rules that are overly lenient towards police misconduct because the result of finding that these police activities are violations is that the exclusionary rule applies. The severity of the exclusion remedy leads judges to characterize the conduct as constitutional when it should not be because they wish to avoid the disproportionate effect of the exclusionary rule. But in doing so, the Supreme Court is distorting the jurisprudence in making the Fourth Amendment less effective at protecting defendants generally, not specifically targeting guilty defendants and aiding innocent defendants, as it should be.

This mirrors the effect described above by jurors: because the exclusionary rule is so imprecise, applying the same clumsy remedy regardless of the nuance of the situation, Supreme Court justices are altering the substance of the law to reflect a better average outcome. But changing the average outcome over the aggregate of cases does little to combat the unfairness of the application of rule-plus-remedy in any individual instance. Individuals subject to intrusive searches have no remedy at all, since the Court refuses to recognize that a wrong has even occurred, so as not to give an extreme remedy to guilty defendants.

The effect of these two judicial responses to the exclusionary rule may significantly decrease its application, but they do not solve either

301 The application of this proposal to the Fifth and Sixth Amendments is explored in more detail in a work in progress by the author.
problem of the exclusionary rule at the policing or trial stage—in fact, it exacerbates both problems further. At the policing stage, lenient search rules allow even more intrusive searches of innocent citizens. At the trial stage, erratic application of the exclusionary rule only increases juror uncertainty and thus juror error, as well as increasing the capricious effect of the exclusionary rule on the extent of the benefit of the doubt defendants receive—i.e., perverse screening. Judicial attempts to mitigate the rule’s harmful effects are actually creating further damage. Thus, the exclusionary rule actually leads to more Fourth Amendment oppressive jurisprudence, compounding the harm to innocent citizens.

Some commentators do not worry about differentiating between innocent and guilty defendants, preferring instead to structure the jurisprudence toward systematically minimizing the state’s police powers to search and seize. For instance, Nagel was unconcerned about over-deterrence by the exclusionary rule, explaining: “[t]he defendant, however, can sometimes be retried on other evidence, and if not, he is still likely to be convicted later for some future crime given the high rate of recidivism among guilty defendants.”

Such a view puts no value on the role of the criminal justice system in mitigating future crime—it is just such a tunnel vision understanding of deterrence that led to the creation of the exclusionary rule in the first place. The system must identify not only innocent but also guilty defendants for society to have any working law and order. That requires crafting doctrines with a view toward promoting differentiation between the innocent and guilty defendants, which should be the dominant criterion in assessing the secondary jurisprudence.

CONCLUSION

The creation of the exclusionary rule was motivated by a desire to avoid harm: to deter police from committing constitutional violations and to avoid the courts becoming complicit in those violations. From the moment of its conception, commentators disputed the claims the Supreme Court made in justifying the rule, questioning whether its alleged benefits really occur—whether illegal searches decreased in the wake of Mapp and querying whether its costs are too great to bear—in terms of lost arrests, lost convictions, and inefficient prosecutions, as well as the violence the rule arguably does to the truth-finding process. This Article has taken a different approach: it has shown that, when stringently examined, the basic logic of the exclusionary

rule cannot hold. Even if we accept the Court's assumptions, its predictions do not follow.

If police are as callous and prone to constitutional violations as the Court assumes, they will not be deterred; if judges exclude all evidence that is in any way tainted by police misconduct, it will not be uniformly ignored by jurors, and judges do not in fact exclude all such evidence. The Court in *Mapp* aimed to punish and deter police by making the rule disproportionate, but doing so only ensured that police would find ways around the rule, by unfortunate substitutions such as perjury and aggressive policing. Jurors and judges resist and distort the rule for the same reason. All these forms of avoidance are highly predictable under a law and economics framework: the exclusionary rule creates over-deterrence, which leads to under-enforcement.

In addition, the behavioral assumptions the exclusionary rule presumes are overly simplistic. Police act as unreliable agents, because their incentives are other than the exclusionary rule presumes: police variously value arrests, harassing minorities, being perceived as effective at controlling crime, and safeguarding the community—not just guaranteeing convictions. Jurors do not passively accept exclusions; they bring their own prior beliefs into the courtroom and make inferences from the absence of evidence. By underestimating these actors, the rule both leaves unremedied unconstitutional searches of citizens who do not come to court as suspects and creates perverse screening at trial, whereby defendants most likely to be actually guilty benefit at the cost of those most likely to be actually innocent.

A common response to the many problems of the exclusionary rule is to advocate its abolition, but whether the rule is abolished and replaced, cannibalized, or else maintained, the secondary jurisprudence that has sprung up largely as a result of judicial resistance must be reformed. The means of reform proposed here is simple: reverse the perversity of the rule's screening by embracing rules that aid differentiation between innocence and guilt.